SEQUENCE LISTING

<110> The Regents of the University of California

<120> Methods for Inhibiting Angiogenesis, Cell Migration, Cell Adhesion, and Cell Survival

<130> UCSD-07947

<160> 116

<170> PatentIn version 3.2

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35 40 45

Trp Leu Arg Lys Lys Leu Gln Asp Val His Asn Phe Val Val Leu Gly
50 55 60

Ala Ser Ile Val His Arg Asp Gly Gly Ser Gln Arg Pro Pro Lys Lys
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Ser Leu Gly Glu Ala Asp Lys Ala Asp Val Asn Val Leu Thr Lys Ala
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Lys Ser Gln
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<213> Homo sapiens

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20 25 30

Val Ser Glu Ile Gln Leu Met His Asn Leu Gly Lys His Leu Asn Ser
35 40 45

Met Glu Arg Val Glu Trp Leu Arg Lys Lys Leu Gln Asp Val His Asn
50 55 60

Phe Val Ala Leu Gly Ala Pro Leu Ala Pro Arg Asp Ala Gly Ser Gln
65 70 75 80

Arg Pro Arg Lys Lys Glu Asp Asn Val Leu Val Glu Ser His Glu Lys
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Ser Leu Gly Glu Ala Asp Lys Ala Asp Val Asn Val Leu Thr Lys Ala
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Lys Ser Gln
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Ile Cys Phe Leu Thr Lys Ser Asp Gly Lys Ser Val Lys Lys Arg Ser
20 25 30
Val Ser Glu Ile Gln Leu Met His Asn Leu Gly Lys His Leu Asn Ser
35 40 45

Met Glu Arg Val Glu Trp Leu Arg Lys Lys Leu Gln Asp Val His Asn
50 55 60

Phe Val Ala Leu Gly Ala Pro Leu Ala Pro Arg Asp Ala Gly Ser Gln
65 70 75 80

Arg Pro Arg Lys Lys Glu Asp Asn Val Leu Val Glu Ser His Glu Lys
85 90 95

Ser Leu Gly Glu Ala Asp Lys Ala Asp Val Asn Val Leu Thr Lys Ala
100 105 110

Lys Ser Gln
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Val Ser Glu Ile Gln Leu Met His Asn Leu Gly Lys His Leu Ala Ser
35 40 45

Met Glu Arg Met Gln Trp Leu Arg Arg Lys Leu Gln Asp Met His Asn
50 55 60

Phe Val Ser Leu Gly Val Gln Met Ala Ala Arg Asp Gly Ser His Gln
65 70 75 80

Lys Pro Thr Lys Lys Glu Glu Asn Val Leu Val Asp Gly Asn Pro Lys
85 90 95

Ser Leu Gly Glu Gly Asp Lys Ala Asp Val Asp Val Leu Val Lys Ser
100 105 110

Lys Ser Gln
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<212> PRT
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<400> 21

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35 40 45

Trp Leu Pro Val Leu Met Lys Asp Ser Ala Ser Ala Ser Thr Leu Gly
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Thr Gly Ser Trp Val Ala Lys Pro Ser Gln Arg Lys Asp Trp Ala Gln
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cctcagcatt gtttttctca gcttcttggc aaaaattaaa acaacaacaa caacaacaac 540

aacaacaaca aacagaagga taaactggct tgcctgtgga ccctccctgg ctctggggcc 600

agtcgagagc cactgaggga cccagcactc agagacacaa cacacatgtg tagctgcttc 660

tggctgagtg tgtttcctgt caccaatggc ctgtttggct ggacgatgcc tcggcttgac 720

ctttttttgaa aagtgctggt tagttcccgc ccctggtaaa cctggggtag gtgggggttc 780

tgtcttaact cgaggggcac ctgggatcca ggacgcttct agggggctct ggctgcccgt 840

gttaatgaag gacagcgctt ccgcgagcac cctgggaact gggtcttggg tagcaaagcc 900

ctcccagaga aaagattggg cacaactaag gctttcctga gcaggaaggg ggtgaagacc 960

aatcccttcc tttggtcctt tggtacgcac cccctcagag ctgagatgga agacatggct 1020

agttcttttc agccttgtgg agcctgtcag tcgccatcat acctcgagtg aggcccagct 1080

agataatgac ttgtccaaga tggcacacgt ggaaagttga tctgcaccag aacccggatg 1140

actgtcacct tgaagcatcc tgttctcctt ctgtgctgtc ccaggaagtg tctggcgggc 1200

gtgggcagca cagctctaca ctgtacgatt cactagggca tcctgcgagc ctcactagcc 1260

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gatgaatctt gcgttgccat tttctgctgt gggtaactgc gtgcagtgtc ttgccttgct 1380

ttctcttctt actgtcccac agcttggttt catgttacaa acagaaaagc tcgaggctcc 1440

caccccgcca catcccaact tcatttcccc ctcactgtag cccatttcca ccccaccaca 1500

aagttgccac aggttttctt tgtatagaat atttattttg aagctctatt ttaatagtat 1560

ttattttaga aagtctacta ttgtaagagt tcttctgttt gtgaagaaaa aaacaagtta 1620

aaaactgaat gtactgattt agaaaatata tataaatata tattgttaaa tatac 1675

<210> 23
<211> 115
<212> PRT
<213> Felis catus

<400> 23

Met Met Ser Ala Lys Asp Met Val Lys Val Met Val Val Met Phe Ala
1 5 10 15

Ile Cys Phe Leu Ala Lys Ser Asp Gly Lys Pro Val Lys Lys Arg Ser
20 25 30

Val Ser Glu Ile Gln Phe Met His Asn Leu Gly Lys His Leu Ser Ser
35 40 45

Val Glu Arg Val Glu Trp Leu Arg Arg Lys Leu Gln Asp Val His Asn
50 55 60

Phe Val Ala Leu Gly Ala Pro Ile Ala His Arg Asp Gly Gly Ser Gln
65 70 75 80

Arg Pro Arg Lys Lys Glu Asp Asn Val Pro Ala Glu Asn His Gln Lys
85 90 95

Ser Leu Gly Glu Ala Asp Lys Ala Asp Val Asp Val Leu Ile Lys Ala
100 105 110

Lys Ser Gln
115

<210> 24
<211> 737

<212> DNA
<213> Felis catus

<400> 24
gcacgaggaa agtatcagct gtcaagacac ctgaaagatc ttgtcacaac cttgtgtgtg 60

aagatgatgt ctgcgaaaga catggttaag gtcatggttg tcatgtttgc aatttgcttt 120

cttgcaaaat cggatgggaa acctgttaag aagaggtctg tgagtgaaat acagtttatg 180

cataacctgg gcaagcatct gagctccgtg gagagggtag aatggctgcg gaggaaacta 240

caggatgtac acaactttgt cgccctcgga gctccaatag ctcacagaga tggtggttcc 300

cagaggcccc gaaaaaagga agacaatgtc ccggctgaga accatcaaaa aagtcttgga 360

gaagcagaca aagctgatgt ggatgtgtta atcaaagcta aatcccagtg aagacagagc 420

agagcactgc tatacacagg atagggcaac aaaattacat gctgctaaca ttctcaagct 480

ttgaagatca ccaaatgcca atatttacgt ctaatccatg gctagccacg atagctgaaa 540

ttctaattga ttgttttgat tctactttta ttcatgtaag gcctctttta attattccat 600

ttctgttgtt tattcttttt aaagtatgtt attgcataat ttataaaaga ataaaattgc 660

actttgtaac ctctctccca tcgtacactg caaaataaaa atttaatgat cataatttta 720

aaaaaaaaaa aaaaaaa 737

<210> 25
<211> 115
<212> PRT
<213> Rattus norvegicus

<400> 25

Met Met Ser Ala Ser Thr Met Ala Lys Val Met Ile Leu Met Leu Ala
1 5 10 15

Val Cys Leu Leu Thr Gln Ala Asp Gly Lys Pro Val Lys Lys Arg Ala
20 25 30

Val Ser Glu Ile Gln Leu Met His Asn Leu Gly Lys His Leu Ala Ser
35 40 45

Val Glu Arg Met Gln Trp Leu Arg Lys Lys Leu Gln Asp Val His Asn
50 55 60

Phe Val Ser Leu Gly Val Gln Met Ala Ala Arg Glu Gly Ser Tyr Gln
65 70 75 80

Arg Pro Thr Lys Lys Glu Glu Asn Val Leu Val Asp Gly Asn Ser Lys
85 90 95

Ser Leu Gly Glu Gly Asp Lys Ala Asp Val Asp Val Leu Val Lys Ala
100 105 110

Lys Ser Gln
115

<210> 26
<211> 704
<212> DNA
<213> Rattus norvegicus

<400> 26
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ccagcttaat acagggtcac tcctgaagga tcctctctga gagtcattgt atgtgaagat 120

gatgtctgca agcaccatgg ctaaggtgat gatcctcatg ctggcagttt gtctccttac 180

ccaggcagat gggaaacccg ttaagaagag agctgtcagt gaaatacagc ttatgcacaa 240

cctgggcaaa cacctggcct ctgtggagag gatgcaatgg ctgagaaaaa agctgcaaga 300

tgtacacaat tttgttagtc ttggagtcca aatggctgcc agagaaggca gttaccagag 360

gcccaccaag aaggaggaaa atgtccttgt tgatggcaat tcaaaaagtc ttggcgaggg 420

ggacaaagct gatgtggatg tattagttaa ggctaaatct cagtaaatgc tgacgtattc 480

tagaccgtgc tgagcaataa catatgctgc tatcctttca agctccacga agatcaccaa 540

gtgctaattc ttctactgta ataaaagttt gaaatttgat tccacttttg ctcatttaag 600

gtctcttcca atgattccat ttcaatatat tcttcttttt aaagtattac acatttccac 660

ttctctcctt aaatataaat aaagtttaat gatcatgaac caaa 704

<210> 27
<211> 115
<212> PRT
<213> Macaca fascicularis

<400> 27

Met Ile Pro Ala Lys Asp Met Ala Lys Val Met Ile Val Met Leu Ala
1 5 10 15

Ile Cys Phe Leu Thr Lys Ser Asp Gly Lys Ser Val Lys Lys Arg Ser
20 25 30

Val Ser Glu Ile Gln Leu Met His Asn Leu Gly Lys His Leu Asn Ser
35 40 45

Met Glu Arg Val Glu Trp Leu Arg Lys Lys Leu Gln Asp Val His Asn
50 55 60

Phe Ile Ala Leu Gly Ala Pro Leu Ala Pro Arg Asp Ala Gly Ser Gln
65 70 75 80

Arg Pro Arg Lys Lys Glu Asp Asn Ile Leu Val Glu Ser His Glu Lys
85 90 95

Ser Leu Gly Glu Ala Asp Lys Ala Asp Val Asp Val Leu Thr Lys Ala
100 105 110

Lys Ser Gln
115

<210> 28
<211> 606
<212> DNA
<213> Macaca fascicularis

<400> 28
tcgtgaaaac caacccaatt agttagtatt gcattctgtg tactatagtt ttgaatatta 60

aaagtatttt aaaatacctc cattttgcct ttccttttag tgaagatgat acctgcaaaa 120

gacatggcta aagtaatgat tgtcatgttg gcaatttgct ttcttacaaa atcagatggg 180

aaatctgtta agtaagtact gttttgcctt ggaattggat ttttaatgtt gactttatca 240

ttttgaagtg gggagctaat gggaagtggc cctctctgtt tctcttcttc ccaggaagag 300

atctgtgagt gaaatacagc ttatgcataa cctgggaaaa catctgaact cgatggagag 360

agtagaatgg ctgcgtaaga agctgcagga tgtgcacaat tttattgccc ttggagctcc 420

tctagctccc agagatgctg gttcccagag gccccgaaaa aaggaagaca atatcttggt 480

agagagccat gaaaaaagtc ttggagaggc agacaaagct gatgtggatg tattaactaa 540

agctaaatcc caatgaaaat gaaaatagat atggtcagag ttctgctcta gacagtgtag 600

ggcaac 606

<210> 29
<211> 552
<212> DNA
<213> Mus musculus

<400> 29
aaaatataaa ctcagtatta tcgattatgt caaaaatttc taggtggaca cttagtattt 60

gctacatctt cttttgcact ttctttgtca gaaccctgct caattttcat ctactatcta 120

gttatctgaa actttagagg agtgggcacc accccatgag ggtatgtggc tgttctgatc 180

ctgtgattga gagccagaga accaggagtg acatcatcct taacaataaa atactcctct 240

tggtgagcaa aaagcctgca tatgaaactc agacttgaag aactgcagtc cagttcatca 300

gctgtctggt ttactccagc ttactacagc atcagtttgt gcatccccga aggatcccct 360

ttgagagtca ttgtatggta aggaacctct caactgccct ttttaaattc tgtgaggttt 420

agaaaattga gctagttttt ttaatacata ccatctccta ccaatatcat gccatttta 480

aaaaaattga aatgttaaag gaaggtgaat tttgctaaac agaaaaatgt agaggtaaaa 540

tacatttatg gt 552

<210> 30
<211> 115
<212> PRT
<213> Mus musculus

<400> 30

Met Met Ser Ala Asn Thr Val Ala Lys Val Met Ile Ile Met Leu Ala
1 5 10 15

Val Cys Leu Leu Thr Gln Thr Asp Gly Lys Pro Val Arg Lys Arg Ala
20 25 30

Val Ser Glu Ile Gln Leu Met His Asn Leu Gly Lys His Leu Ala Ser
35 40 45

Met Glu Arg Met Gln Trp Leu Arg Arg Lys Leu Gln Asp Met His Asn
50 55 60

Phe Val Ser Leu Gly Val Gln Met Ala Ala Arg Asp Gly Ser His Gln
65 70 75 80

Lys Pro Thr Lys Lys Glu Glu Asn Val Leu Val Asp Gly Asn Pro Lys
85 90 95

Ser Leu Gly Glu Gly Asp Lys Ala Asp Val Asp Val Leu Val Lys Ser
100 105 110

Lys Ser Gln
115

<210> 31
<211> 1045
<212> DNA
<213> Mus musculus

<400> 31
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ctttagaaca ctgacagtat cttaaaatat ctcaaggttg tttcttcttt tagtaaagat 120

gatgtctgca aacaccgtgg ctaaagtgat gatcatcatg ctggcagtct gtcttcttac 180

ccaaacggat gggaaacccg tgaggtaagt gctgcagccc attgtgcaca gggaagtgtg 240

gactcgaggc tttgtagtgg gttttaacgt tgtgggcatg gggagctaat ggaacggtcc 300

gctctttctc ttctttctag gaagagagct gtcagtgaaa tacagcttat gcacaacctg 360

ggcaaacacc tggcctccat ggagaggatg caatggctga gaaggaagct gcaagatatg 420

cacaattttg ttagtcttgg agtccaaatg gctgccagag atggcagtca ccagaagccc 480

accaagaagg aggaaaatgt ccttgttgat ggcaatccaa aaagtcttgg tgagggagac 540

aaagctgatg tggatgtatt agttaaatca aaatctcagt aaatgctgat ttattctaga 600

cagtgcaggg cactgacata tgctgctacc ttttcaagct tatgaagatc accaagtgct 660

aatacttcta ctgtaatgaa actttggaat ttttttgatt acatttttgc tcatttaagg 720

tctctttcaa tgattccatt tcaatatgct cttcttttta aagtactact catttccact 780

tctctcctta aatataaata aagctttaat gctcatgaat caagtaagca gtgtttcttg 840

ttaaaacttt gtctcagttg gagggttggc tcagaagtta aaattgcaaa ctgtagggct 900

ggagagatgg ttcagcggtt aagagcactg accgctcttc cagaggtcct gagtttaatt 960

cccagcaacc acatggtggc tcacaatcat ctgtaatggg atctgatgcc ctcttctggt 1020

gtgtctgaag acagcaacag tgtac 1045

<210> 32
<211> 100
<212> DNA
<213> Homo sapiens

<400> 32
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tataaaacca tttgtgtatg cagaagattg aaactgggac 100

<210> 33
<211> 115
<212> PRT
<213> Sus scrofa

<400> 33

Met Met Ser Ala Lys Asp Thr Val Lys Val Met Val Val Met Leu Ala
1 5 10 15

Ile Cys Phe Leu Ala Arg Ser Asp Gly Lys Pro Ile Lys Lys Arg Ser
20 25 30

Val Ser Glu Ile Gln Leu Met His Asn Leu Gly Lys His Leu Ser Ser
35 40 45

Leu Glu Arg Val Glu Trp Leu Arg Lys Lys Leu Gln Asp Val His Asn
50 55 60

Phe Val Ala Leu Gly Ala Ser Ile Val His Arg Asp Gly Gly Ser Gln
65 70 75 80

Arg Pro Arg Lys Lys Glu Asp Asn Val Leu Val Glu Ser His Gln Lys
85 90 95

Ser Leu Gly Glu Ala Asp Lys Ala Ala Val Asp Val Leu Ile Lys Ala
100 105 110

Lys Pro Gln
115

<210> 34
<211> 698
<212> DNA
<213> Sus scrofa

<400> 34
aattcatcag ccttctcggg tttactcaac tttgagaaag catcagctgc taacacacct 60

gaaagaagat cgtgtcctaa gacgttgtgt gtgaagatga tgtctgcaaa agacacagtt 120

aaagtaatgg ttgtcatgct tgcaatttgt tttcttgcaa gatcagatgg gaagcctatt 180

aagaagagat ctgtgagtga aatacagctt atgcataacc tgggcaaaca cctgagctct 240

ctggagagag tggaatggct gcgaaagaag ctgcaggatg tgcacaactt tgttgccctc 300

ggagcttcta tagttcacag agatggtggt tcccagagac cccgaaaaaa ggaagacaat 360

gtcctggttg agagccatca aaaaagtctc ggagaagcag ataaagctgc tgtggatgta 420

ttaattaaag ctaaacccca gtgaaaacac atatgatcag agagcactgc tctagacagc 480

ataaggcaaa caatatttca tgctgctaat gttttcaatc tctattaaga ttaagtgcca 540

atatttctaa tattactaaa cttgatgggt aatcattgct agccatgatt gctgaaattt 600

taattgatca ttttgattct acttttactc atttaagagc ttcttttaac aattctattt 660

ctattgattc taaataaatg aagtatttct tccttgtt 698

<210> 35
<211> 102
<212> PRT
<213> Bos taurus

<400> 35

Met Ile His Tyr Asn Pro His Asn Asn Cys Ala Asn Val Met Ala Val
1 5 10 15

Arg Asn Ile Leu Ile Phe Asn Phe Thr Phe Lys Tyr Asn Lys Met Met
20 25 30

Trp Trp Trp Phe Ser Ala Lys Ser Cys Pro Thr Leu Val Thr Pro Trp
35 40 45

Thr Val Ala Ala Ser Ser Ser Val His Gly Phe Phe Arg Ala Arg Ile
50 55 60

Leu Glu Trp Val Ala Ile Ser Phe Ser Gly Glu Ser Ser Gln Ser Arg
65 70 75 80

Asn Gln Thr Gln Val Ser Cys Ile Ala Gly Glu Ile Leu Tyr Gln Leu
85 90 95

Ser Tyr Glu Arg Ser Leu
100

<210> 36
<211> 641
<212> DNA
<213> Bos taurus

<400> 36
gttactgctt ttcagtgttt ttattgaaaa ctaaaattaa aaatataagg taaatgaatt 60

ttaaaatagt tttacttttg aagcccttta aaattatgta cagagagcca tattctcaaa 120

atatttttaa cacttccttt aagaaaagca ctatatatat ttttttggaa caagatcagg 180

aatgatacag actggtccaa tatggcttgt aaagtaagca taatgtaata tgattcatta 240

taatcctcat aataattgtg ccaatgttat ggctgtaaga aatatactta ttttcaattt 300

cactttcaaa tacaataaga tgatgtggtg gtggtttagt gctaagtcgt gtccaactct 360

tgtgacccca tggactgtag ctgccagctc ctctgttcat ggattcttca gggcaagaat 420

actggagtgg gttgccattt ccttctctgg ggagtcttcc caatccagga atcaaaccca 480

ggtctcctgc attgcaggcg agattcttta ccaactgagc tatgagagaa gcctgtgata 540

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ttgctcagtt gctaattcat gtccaaccgc tttacactgc a 641

<210> 37
<211> 296
<212> DNA
<213> Bos taurus

<400> 37
atactccctt ttcttcttat tacctcaacc ccattcacat atcaggctta gatttcttag 60

agaagtatca tgctggaatt tctttttttcc agaaggataa aggataaata attctagaac 120

ttgacagttg tcattaaagt aacaaccagg tgaattaaat aacccccttga tagctcagtt 180

ggtatagaat caccttcaat gcaggagacc ctggttcaat tcctgggttg ggacgatcca 240

ctggataagg gataggctac ccactccagt attcttggac tttccttgtg tctcag 296

<210> 38
<211> 115
<212> PRT
<213> Homo sapiens

<400> 38

Met Ile Pro Ala Lys Asp Met Ala Lys Val Met Ile Val Met Leu Ala
1 5 10 15

Ile Cys Phe Leu Thr Lys Ser Asp Gly Lys Ser Val Lys Lys Arg Ser
20 25 30

Val Ser Glu Ile Gln Leu Met His Asn Leu Gly Lys His Leu Asn Ser
35 40 45

Met Glu Arg Val Glu Trp Leu Arg Lys Lys Leu Gln Asp Val His Asn
50 55 60

Phe Val Ala Leu Gly Ala Pro Leu Ala Pro Arg Asp Ala Gly Ser Gln
65 70 75 80

Arg Pro Arg Lys Lys Glu Asp Asn Val Leu Val Glu Ser His Glu Lys
85 90 95

Ser Leu Gly Glu Ala Asp Lys Ala Asp Val Asn Val Leu Thr Lys Ala
100 105 110

Lys Ser Gln
115

<210> 39
<211> 772
<212> DNA
<213> Homo sapiens

<400> 39
tgtctttagt ttactcagca tcagctacta acatacctga acgaagatct tgttctaaga 60

cattgtatgt gaagatgata cctgcaaaag acatggctaa agttatgatt gtcatgttgg 120

caatttgttt tcttacaaaa tcggatggga aatctgttaa gaagagatct gtgagtgaaa 180

tacagcttat gcataacctg ggaaaacatc tgaactcgat ggagagagta gaatggctgc 240

gtaagaagct gcaggatgtg cacaattttg ttgcccttgg agctcctcta gctcccagag 300

atgctggttc ccagaggccc cgaaaaaagg aagacaatgt cttggttgag agccatgaaa 360

aaagtcttgg agaggcagac aaagctgatg tgaatgtatt aactaaagct aaatcccagt 420

gaaaatgaaa acagatattg tcagagttct gctctagaca gtgtagggca acaatacatg 480

ctgctaattc aaagctctat taagatttcc aagtgccaat atttctgata taacaaacta 540

catgtaatcc atcactagcc atgataactg caattttaat tgattattct gattccactt 600

ttattcattt gagttatttt aattatcttt tctattgttt attcttttta aagtatgtta 660

ttgcataatt tataaaagaa taaaattcga cttttaaacc tctcttctac cttaaaatgt 720

aaaacaaaaa tgtaatgatc ataagtctaa ataaatgaag tatttctcac tc 772

<210> 40
<211> 115
<212> PRT
<213> Rattus norvegicus

<400> 40

Met Met Ser Ala Ser Thr Met Ala Lys Val Met Ile Leu Met Leu Ala
1 5 10 15

Val Cys Leu Leu Thr Gln Ala Asp Gly Lys Pro Val Lys Lys Arg Ala
20 25 30

Val Ser Glu Ile Gln Leu Met His Asn Leu Gly Lys His Leu Ala Ser
35 40 45

Val Glu Arg Met Gln Trp Leu Arg Lys Lys Leu Gln Asp Val His Asn
50 55 60

Phe Val Ser Leu Gly Val Gln Met Ala Ala Arg Glu Gly Ser Tyr Gln
65 70 75 80

Arg Pro Thr Lys Lys Glu Glu Asn Val Leu Val Asp Gly Asn Ser Lys
85 90 95

Ser Leu Gly Glu Gly Asp Lys Ala Asp Val Asp Val Leu Val Lys Ala
100 105 110

Lys Ser Gln
115

<210> 41
<211> 704
<212> DNA
<213> Rattus norvegicus

<400> 41
ctgcatatga aactcaggct tgaagaactg cagtccagtt catcagctgt ctggcttact 60

ccagcttaat acagggtcac tcctgaagga tcctctctga gagtcattgt atgtgaagat 120

gatgtctgca agcaccatgg ctaaggtgat gatcctcatg ctggcagttt gtctccttac 180

ccaggcagat gggaaacccg ttaagaagag agctgtcagt gaaatacagc ttatgcacaa 240

cctgggcaaa cacctggcct ctgtggagag gatgcaatgg ctgagaaaaa agctgcaaga 300

tgtacacaat tttgttagtc ttggagtcca aatggctgcc agagaaggca gttaccagag 360

gcccaccaag aaggaggaaa atgtccttgt tgatggcaat tcaaaaagtc ttggcgaggg 420

ggacaaagct gatgtggatg tattagttaa ggctaaatct cagtaaatgc tgacgtattc 480

tagaccgtgc tgagcaataa catatgctgc tatcctttca agctccacga agatcaccaa 540

gtgctaattc ttctactgta ataaaagttt gaaatttgat tccacttttg ctcatttaag 600

gtctcttcca atgattccat ttcaatatat tcttcttttt aaagtattac acatttccac 660

ttctctcctt aaatataaat aaagtttaat gatcatgaac caaa 704

<210> 42
<211> 115
<212> PRT
<213> Rattus norvegicus

<400> 42

Met Met Ser Ala Ser Thr Met Ala Lys Val Met Ile Leu Met Leu Ala
1 5 10 15

Val Cys Leu Leu Thr Gln Ala Asp Gly Lys Pro Val Lys Lys Arg Ala
20 25 30

Val Ser Glu Ile Gln Leu Met His Asn Leu Gly Lys His Leu Ala Ser
35 40 45

Val Glu Arg Met Gln Trp Leu Arg Lys Lys Leu Gln Asp Val His Asn
50 55 60

Phe Val Ser Leu Gly Val Gln Met Ala Ala Arg Glu Gly Ser Tyr Gln
65 70 75 80

Arg Pro Thr Lys Lys Glu Glu Asn Val Leu Val Asp Gly Asn Ser Lys
85 90 95

Ser Leu Gly Glu Gly Asp Lys Ala Asp Val Asp Val Leu Val Lys Ala
100 105 110

Lys Ser Gln
115

<210> 43
<211> 973
<212> DNA
<213> Rattus norvegicus

<400> 43
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ctaatgactg tttccttggg tggttatgaa taacagctac tgggactgtg tttacacact 120

ttagagcact gacagtgtct taaaatatct ctgtctctcc ttgtagtgaa gatgatgtct 180

gcaagcacca tggctaaggt gatgatcctc atgctggcag tttgtctcct tacccaggca 240

gatgggaaac ccgttaagta agtgctgcag cccgtcgtcc cagggaagtc ggacatgagg 300

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ctctctagga agagagctgt cagtgaaata cagcttatgc acaacctggg caaacacctg 420

gcctctgtgg agaggatgca atggctgaga aaaaagctgc aagatgtaca caattttgtt 480

agtcttggag tccaaatggc tgccagagaa ggcagttacc agaggcccac caagaaggag 540

gaaaatgtcc ttgttgatgg caattcaaaa agtcttggcg agggggacaa agctgatgtg 600

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atttcaatat attcttcttt ttaaagtatt acacatttcc acttctctcc ttaaatataa 840

ataaagttta atgatcatga accaaataag cagtgtttct tacttgttaa aacttttgtc 900

tcagtgttgg agggctggct cagaagttaa gagtgcatac tgcttcctca aatgacccga 960

gtttgcttct cgg 973

<210> 44
<211> 709
<212> DNA
<213> Rattus norvegicus

<400> 44
gaaagtgcag gcccagtggc aatgtcttta actttgcact catgaataga ggcaagtgga 60

tcttgagttt tgggtcagcc tgatctacat attgagttct aggccagcca gagttcatag 120

tgagacgcta tctcaaactg ttttaaatat aaaatcagta tcatggatta cgtcagattt 180

ttctaagtgg ttacttaagc atttgctgca acttcttttg cagattcttt gccagcacct 240

tgctcttttt gaatccatta tctaagtatc tgaaacttta gaggagtggg caccgcccga 300

tgagggtagg tggctgttct gattcctatg attgagaacc agagaaccag gcatgacatc 360

atccttccca ataaaatact cctcttggtg agcaaaaggc ctgcatatga aactcaggct 420

tgaagaactg cagtccagtt catcagctgt ctggcttact ccagcttaat acagggtcac 480

tcctgaagga tcctctctga gagtcattgt atggtaagga atctctcaat tgcccttta 540

aattccgtga gatttagaaa attgtgctag tttttaatac ataccatttt ctatcaatat 600

gtgccatttt ttaaaattgg aaggtagggg tgaatttgcc aaaatggaag gatatggcaa 660

taaaataatt tagggtagga aattcggact catctatgta tatggttaa 709

<210> 45
<211> 523
<212> DNA
<213> Gallus gallus

<220>
<221> misc_feature
<222> (426)..(430)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (438)..(443)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (449)..(451)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (492)..(494)
<223> n is a, c, g, or t

<400> 45
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aagatcagta gaggggatca gccgcagact caaacgggcc gtatcagagc accagctact 180

gcatgacaag ggcaaatcaa tccaagactt acgaagaagg atattccttc aaaatttaat 240

tgaaggtgtc aacactgcag aaatccgtgc aacttcagag gtctcaccta accctaagcc 300

tgctaccaac acaaagaact accctgtccg ttttggcagt gaagatgagg gcagatacct 360

aactcaggag acaaacaaat cacagaccta caaggaacag cccctgaagg tatcagggaa 420

gaaaannnnn gcaaagcnnn nnnaacgtnn ngaacaagag aagaaaaaga ggcgagctcg 480

ctcagcttgg cnnnattctg gcatgcatat catacagtta ctg 523

<210> 46
<211> 175
<212> PRT
<213> Mus musculus

<400> 46

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Met Leu Arg Arg Leu Val Gln Gln Trp Ser Val Leu Val Phe Leu Leu
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Ser Tyr Ser Val Pro Ser Arg Gly Arg Ser Val Glu Gly Leu Gly Arg
            20                  25                  30

Arg Leu Lys Arg Ala Val Ser Glu His Gln Leu Leu His Asp Lys Gly
        35                  40                  45

Lys Ser Ile Gln Asp Leu Arg Arg Arg Phe Phe Leu His His Leu Ile
    50                  55                  60

Ala Glu Ile His Thr Ala Glu Ile Arg Ala Thr Ser Glu Val Ser Pro
65                  70                  75                  80

Asn Ser Lys Pro Ala Pro Asn Thr Lys Asn His Pro Val Arg Phe Gly
                85                  90                  95

Ser Asp Asp Glu Gly Arg Tyr Leu Thr Gln Glu Thr Asn Lys Val Glu
            100                 105                 110

Thr Tyr Lys Glu Gln Pro Leu Lys Thr Pro Gly Lys Lys Lys Lys Gly
        115                 120                 125

Lys Pro Gly Lys Arg Arg Glu Gln Glu Lys Lys Lys Arg Arg Thr Arg
    130                 135                 140

Ser Ala Trp Pro Ser Thr Ala Ala Ser Gly Leu Leu Glu Asp Pro Leu
145                 150                 155                 160

Pro His Thr Ser Arg Thr Ser Leu Glu Pro Ser Leu Arg Thr His
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<210> 47
<211> 1592
<212> DNA
<213> Mus musculus

<400> 47

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ccgccctcgc gccacctggc ctcgcatcca cgacacgcgc gcctgcaact tgttcaaggg    240

cgttgtggaa tcaactttcc ggaagcaacc agcccaccga aggagggtgc acccagaggc    300

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ccccacgacc cagagtgctg ccgccaagac taattagaca ttgctatggg agccacagca    420

acgcgccacg catccccgac gcctatgtaa aacgcccggt tttcgctctt ctttcagagg    480

aagctctctg attgcttttt cccctctcgg gtccctttt gcctgtgcgg tttgagagag    540
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ccgcgggcgt tcggtggagg ggcttggccg caggctcaaa cgcgctgtgt ctgaacatca 720

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tctgatcgcg gagatccaca cagccgaaat cagagctacc tcggaggtgt cccccaactc 840

caaacctgct cccaacacca aaaaccaccc cgtgcggttt gggtcagacg atgagggcag 900

atacctaact caggaaacca acaaggtgga gacgtacaaa gaacagccac tcaagacacc 960

cgggaagaag aagaaaggca agcctgggaa acgcagagaa caggagaaaa agaagcgaag 1020

gactcggtct gcctggccaa gcacagctgc gagtggcctg cttgaggacc ccctgcccca 1080

cacctccagg acctcgctgg agcccagctt aaggacgcat tgaaattttc atcgaagatc 1140

ttccaaggac acgttacagg attttgtaat agtaaacata tggaaagtat tagacatatt 1200

tattgcctgt acatactgta aatgcattgg gatcaaactg tctccccagg aaactgcaca 1260

tgggtcatgt gaatattttt ccctttgcc aaggctaatc caattattcc tgtcactgtt 1320

accataattt attttgtcaa ctgatgtatt tatttgtaaa tgtatcttgg tgctgctgac 1380

tctgtttttt tgtaacataa tgcactttag gtatacatat cgagtatgtg gatgaattta 1440

acacataaaa ggatctctat tttgtggttc attttaatga gttctgaaat ataattatct 1500

agactgattt ccttctgtgc atgtaaaaat ggcagtattt taaatttgtt aaataatgtc 1560

taataaaata taatctaatt ataccatgac tc 1592

<210> 48
<211> 242
<212> DNA
<213> Felis catus

<400> 48
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tcccattgct ctatgaaact gcacattggt cattgtgaat atttttttgc caaggctaat 180

ccaattatta ttatcacatt taccataatt tattttgtca actgatgtat ttattttgta 240

aa 242

<210> 49
<211> 351
<212> DNA
<213> Felis catus

<400> 49
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tccactgtgg cttggacaaa cctagaatgt cctccctttc tgtccttcta tcaattgctc 120

cacaatttca aagcttaatg aaagcaagat ggctcagaat attgtctgct ttcatacagt 180

gtcctcctat gccctctata cacaccagca ttgaataacc cgtttctctt cctccaccat 240

cacaccccaa cgccaatcct ttactcctcc actaaagaat ttctttttt cgtcaggctt 300

cagaagctag ggaccacctt catcatttgc tggaggagtg tatttattcc c 351

<210> 50
<211> 94
<212> PRT
<213> Felis catus

<400> 50

Leu Leu Ser Tyr Ser Val Pro Ser Cys Gly Arg Ser Val Glu Glu Leu
1 5 10 15

Gly Arg Arg Leu Lys Arg Ala Val Ser Glu His Gln Leu Leu His Asp
20 25 30

Lys Gly Lys Ser Ile Gln Asp Leu Arg Arg Arg Phe Phe Leu His His
35 40 45

Leu Ile Ala Glu Ile His Thr Ala Glu Ile Arg Ala Thr Ser Glu Val
50 55 60

Ser Pro Asn Ser Lys Pro Ala Pro Asn Thr Lys Asn His Pro Val Arg
65 70 75 80

Phe Gly Ser Asp Asp Glu Gly Arg Tyr Leu Thr Gln Glu Thr
85 90

<210> 51
<211> 282
<212> DNA
<213> Felis catus

<400> 51
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aaaagagctg tgtctgaaca tcagctcctt catgacaagg ggaaatctat ccaagactta 120

cgacgacgat tcttccttca ccacctgatt gcagaaatcc acacagctga aatcagagct 180

acctcggagg tttcccccaa ctccaagcct gctcccaaca caaagaacca cccagtccga 240

tttgggtctg acgatgaagg cagataccta actcaggaaa cc 282

<210> 52
<211> 202
<212> PRT
<213> Oryctolagus cuniculus

<400> 52

Met Gln Arg Arg Leu Val Gln Gln Trp Ser Val Ala Val Phe Leu Leu
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Ser Tyr Ala Val Pro Ser Cys Gly Arg Ser Val Glu Gly Leu Ser Arg
20 25 30

Arg Leu Lys Arg Ala Val Ser Glu His Gln Leu Leu His Asp Lys Gly
35 40 45

Lys Ser Ile Gln Asp Leu Arg Arg Arg Phe Phe Leu His His Leu Ile
50 55 60

Ala Glu Ile His Thr Ala Glu Ile Arg Ala Thr Ser Glu Val Ser Pro
65 70 75 80

Asn Ser Lys Pro Ser Pro Asn Thr Lys Asn His Pro Val Arg Phe Gly
85 90 95

Ser Asp Asp Glu Gly Arg Tyr Leu Thr Gln Glu Thr Asn Lys Val Glu
100 105 110

Thr Tyr Lys Glu Gln Pro Leu Lys Thr Pro Gly Lys Lys Lys Lys Gly
115 120 125

Lys Pro Gly Lys Arg Lys Glu Gln Glu Lys Lys Lys Arg Arg Thr Arg
130 135 140

Ser Ala Trp Leu Asp Ser Gly Val Thr Gly Ser Gly Leu Glu Gly Asp
145 150 155 160

His Leu Ser Asp Thr Phe Thr Thr Ser Leu Gly Ala Arg Phe Thr Tyr
165 170 175

Ser Thr Ser Val Gly Phe Glu Lys Lys Lys Gly Lys Gln Gln Lys Asn
180 185 190

Thr Ser Tyr Ala Thr Asn Asp Leu Ile Ile
195 200

<210> 53
<211> 650
<212> DNA
<213> Oryctolagus cuniculus

<400> 53
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gtgtctgaac atcagctcct ccatgacaag gggaagtcca tccaagattt acggcgacga 180

ttcttccttc accatctgat cgcagaaatc cacacagctg aaatcagagc tacctcggag 240

gtgtccccta actccaagcc ctctcccaac acaaagaacc accccgtccg atttgggtct 300

gatgatgagg gcagatacct aactcaggaa actaacaagg tggagacgta caaagagcag 360

ccgctcaaga cacctgggaa gaaaaagaaa ggcaagcccg ggaaacgcaa ggagcaggaa 420

aagaaaaaac ggcgaactcg ctctgcctgg ttagactctg gagtgactgg gagtgggcta 480

gaaggggacc acctgtctga caccttcaca acgtcgcttg gagctcgatt cacgtacagc 540

acttctgtgg ggtttgaaaa aaaaaaagga aaacaacaga agaacacatc atatgcaact 600

aatgatctca ttatttaaga gttccctgtt acttctttag tctagaccca 650

<210> 54
<211> 175
<212> PRT
<213> Mus musculus

<400> 54

Met Leu Arg Arg Leu Val Gln Gln Trp Ser Val Leu Val Phe Leu Leu
1 5 10 15

Ser Tyr Ser Val Pro Ser Arg Gly Arg Ser Val Glu Gly Leu Gly Arg
20 25 30

Arg Leu Lys Arg Ala Val Ser Glu His Gln Leu Leu His Asp Lys Gly
35 40 45

Lys Ser Ile Gln Asp Leu Arg Arg Arg Phe Phe Leu His His Leu Ile
50 55 60

Ala Glu Ile His Thr Ala Glu Ile Arg Ala Thr Ser Glu Val Ser Pro
65 70 75 80

Asn Ser Lys Pro Ala Pro Asn Thr Lys Asn His Pro Val Arg Phe Gly
85 90 95

Ser Asp Asp Glu Gly Arg Tyr Leu Thr Gln Glu Thr Asn Lys Val Glu
100 105 110

Thr Tyr Lys Glu Gln Pro Leu Lys Thr Pro Gly Lys Lys Lys Lys Gly
115 120 125

Lys Pro Gly Lys Arg Arg Glu Gln Glu Lys Lys Lys Arg Arg Thr Arg
130 135 140

Ser Ala Trp Pro Ser Thr Ala Ala Ser Gly Leu Leu Glu Asp Pro Leu
145 150 155 160

Pro His Thr Ser Arg Pro Ser Leu Glu Pro Ser Leu Arg Thr His
165 170 175

<210> 55
<211> 572
<212> DNA
<213> Mus musculus

<400> 55
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ttcctgctca gctactccgt gccctcccgc gggcgttcgg tggaggggct tggccgcagg 120

ctcaaacgcg ctgtgtctga acatcagcta ctgcatgaca agggcaagtc catccaagac 180

ttgcgccgcc gtttcttcct ccaccatctg atcgcggaga tccacacagc cgaaatcaga 240

gctacctcgg aggtgtcccc caactccaaa cctgctccca acaccaaaaa ccaccccgtg 300

cggtttgggt cagacgatga gggcagatac ctaactcagg aaaccaacaa ggtggagacg 360

tacaaagaac agccactcaa gacacccggg aagaagaaga aaggcaagcc tgggaaacgc 420

agagaacagg agaaaaagaa gcgaaggact cggtctgcct ggccaagcac agctgcgagt 480

ggcctgcttg aggacccccc gccccacacc tccaggccct cgctggagcc cagcttaagg 540

acgcattgaa attttcatcg aagatcttcc aa 572

<210> 56
<211> 162
<212> PRT
<213> Sparus aurata

<400> 56

Met Cys Ser Ile Val Ile Leu His His Trp Ser Leu Ala Val Phe Leu
1 5 10 15

Leu Cys Ser Pro Val Thr Leu Asp Gly Lys Pro Val Asp Ala Leu Gly
20 25 30

Ser Arg Thr Arg Arg Ser Val Ser His Ala Gln Leu Met His Asp Lys
35 40 45

Gly Arg Ser Leu Gln Glu Phe Lys Arg Arg Met Trp Leu His Glu Leu
50 55 60

Leu Glu Glu Val His Thr Ala Asp Asp Arg Pro Val Gln Ser Arg Thr
65 70 75 80

Gln Ser Gln Thr Phe Ser Gly Asn Ala Leu His Glu Lys Pro Pro Gly
85 90 95

Ala Thr Lys Asn Ile Pro Asp Arg Phe Arg Leu Asp Arg Glu Gly Pro
100 105 110

Asn Leu Pro Gln Glu Thr Asn Lys Ala Leu Ala Tyr Lys Asp Gln Pro
115 120 125

Leu Lys Val Ala Thr Lys Arg Lys Lys Lys Val Arg Leu Gly Arg Arg
130 135 140

Arg Glu Ser Asp Lys Lys Arg Arg Arg Ala Arg Ser Val Thr Thr Lys
145 150 155 160

Glu Gln

<210> 57
<211> 1787

<212> DNA
<213> Sparus aurata

<400> 57
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cactctcacc gttttacatt atagtttatt tttatagaac aagaccgaga caggggctct 1680
cagactcata taatgttctt cacttgcact gagcgcatac tgttcatgtt tccagttaat 1740
caaccattaa aagtgtagtc attagaaaca aaaaaaaaaa aaaaaaa 1787

<210> 58
<211> 177
<212> PRT

<213> Oryctolagus cuniculus

<400> 58

Met Leu Arg Arg Leu Val Gln Gln Trp Ser Val Ala Val Phe Leu Leu
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Ser Tyr Ser Val Pro Ser Cys Gly Arg Ser Val Glu Gly Pro Gly Arg
20 25 30

Arg Leu Lys Arg Ala Val Ser Glu His Gln Leu Leu His Asp Lys Gly
35 40 45

Lys Ser Ile Gln Asp Leu Arg Arg Arg Phe Phe Leu His His Leu Ile
50 55 60

Ala Glu Ile His Thr Ala Glu Ile Arg Ala Thr Ser Glu Val Ser Pro
65 70 75 80

Asn Ser Lys Pro Ala Ala Asn Thr Lys Asn His Ala Val Arg Phe Gly
85 90 95

Ser Asp Asp Glu Gly Arg Tyr Leu Thr Gln Glu Thr Asn Lys Val Glu
100 105 110

Pro Tyr Lys Glu Gln Pro Leu Lys Thr Pro Gly Lys Lys Lys Lys Gly
115 120 125

Lys Pro Gly Lys Arg Lys Glu Gln Glu Lys Lys Lys Arg Arg Thr Arg
130 135 140

Ser Ala Trp Pro Leu Ser Ala Gly Ala Gly Ser Gly Leu Ala Gly Asp
145 150 155 160

His Leu Ser Asp Ile Ser Glu Pro Glu Pro Glu Leu Asp Ser Arg Arg
165 170 175

His

<210> 59
<211> 534
<212> DNA
<213> Oryctolagus cuniculus

<400> 59
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caccaactcc tccatgacaa gggcaagtcc atccaagacc tccggcgccg cttcttcctg 180

caccacctga tagccgaaat ccacaccgcc gagatcagag ctacctccga ggtctccccc 240

aactccaagc ccgccgccaa caccaagaac cacgcggtgc gcttcgggtc ggacgatgag 300

ggcaggtacc tcactcagga aaccaacaag gtggagccct acaaggagca gcccctcaag 360

acgcctggca agaaaaagaa aggcaagccc gggaagcgca aggagcagga gaagaagaag 420

cggcgaactc gctccgcctg gccgctgtca gcgggcgcgg gcagtgggct cgcgggcgac 480

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<210> 60
<211> 163
<212> PRT
<213> Takifugu rubripes

<400> 60

Met Cys Ser Val Val Met Leu His Gln Trp Ser Leu Ala Val Phe Leu
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Leu Cys Ser Pro Val Thr Leu Asp Gly Lys Pro Val Asp Ala Val Ser
20 25 30

Ser Arg Met Arg Arg Ser Val Ser His Ala Gln Leu Met His Asp Lys
35 40 45

Gly Arg Ser Leu Gln Glu Phe Arg Arg Arg Met Trp Leu His Lys Leu
50 55 60

Leu Glu Glu Val His Thr Ala Asn Glu Glu Ala Pro Pro Val Gln Ser
65 70 75 80

Arg Thr Gln Thr Gln Thr Phe Ser Gly Asn Ser Leu His Glu Lys Pro
85 90 95

Pro Gly Ala Thr Lys Asn Leu Pro Asp Arg Phe Ser Leu Asp Arg Glu
100 105 110

Gly Thr Asn Leu Pro Gln Glu Thr Asn Lys Ala Leu Ala Tyr Lys Asp
115 120 125

Gln Pro Leu Lys Leu Ala Thr Lys Arg Lys Lys Lys Ala Arg Leu Gly
130 135 140

Arg His Arg Glu Ala Asp Lys Lys Arg Arg Arg Ala Arg Ser Val Ala
145 150 155 160

Lys Glu Pro

<210> 61
<211> 2272
<212> DNA
<213> Takifugu rubripes

<400> 61
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gctgctgctg ctccttcctc ggtcgtctct ttttaacctg gactctcggg agaaataaat 180
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ggacacgcca aagcagcggc tctcagcctc atttaaagtt cttcatttgc actgagggca 2220

tactgtacat gtttccagtt aatccaacat taaaaatgta gccaatagaa ac 2272

<210> 62
<211> 249
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 62
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agccgctgaa aaccccgggt aaaaaaaaga aaggtaaacc gggtaaacgt aaagaacagg 120

aaaaaaagaa acgtcgtacg cgttctgctt ggctggactc tggtgttacc ggatccggtc 180

tggaaggtga ccacctgtct gacacctcta ccacaagcct ggaactggac tctcgtcgtc 240

actaataag 249

<210> 63
<211> 207
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 63
aattcatcga tatgctgctg cacgacaaag gtaaatctat ccaagatctg cgtcgccgtt 60

tcttcctgca ccacctgatc gctgaaatcc acactgcaga aatccgtgct acctctgaag 120

tttctccgaa ctctaaaccg tctccgaaca ccaaaaacca cccggttcgt ttcggttctg 180

acgacgaagg tcggtacctg taataag 207

<210> 64
<211> 177
<212> PRT
<213> Canis familiaris

<400> 64

Met Leu Arg Arg Leu Val Gln Gln Trp Gly Val Ala Val Phe Leu Leu
1 5 10 15

Ser Tyr Ser Val Pro Ser Cys Gly Arg Ser Val Glu Glu Leu Gly Arg
20 25 30

Arg Leu Lys Arg Ala Val Ser Glu His Gln Leu Leu His Asp Lys Gly
35 40 45

Lys Ser Ile Gln Asp Leu Arg Arg Arg Phe Phe Leu His His Leu Ile
50 55 60

Ala Glu Ile His Thr Ala Glu Ile Arg Ala Thr Ser Glu Val Ser Pro
65 70 75 80

Asn Ser Lys Pro Ala Pro Asn Thr Lys Asn His Pro Val Arg Phe Gly
85 90 95

Ser Asp Asp Glu Gly Arg Tyr Leu Thr Gln Glu Thr Asn Lys Val Glu
100 105 110

Thr Tyr Lys Glu Gln Pro Leu Lys Thr Pro Gly Lys Lys Lys Lys Gly
115 120 125

Lys Pro Gly Lys Arg Lys Glu Gln Glu Lys Lys Lys Arg Arg Thr Arg
130 135 140

Ser Ala Trp Leu Asn Ser Gly Val Ala Glu Ser Gly Leu Glu Gly Asp
145 150 155 160

His Pro Tyr Asp Ile Ser Ala Thr Ser Leu Glu Leu Asn Leu Arg Arg
165 170 175

His

<210> 65
<211> 1166
<212> DNA
<213> Canis familiaris

<400> 65
cggcacgagg aagtttttca ttcatttaag acttcatttt actcttttga agcaaaaaaa 60

aaaaaattaa tttctggaag agactgctga gaagatcccc ttcgtttggc cagaagagaa 120

gagaggactg taaatcaagg aaaaggtccc gcgagcgaca ggggacgatg ctgcggaggc 180

tggttcagca gtggggcgtc gcggtgttcc tgctgagcta ctcggtgccc tcctgcgggc 240

gctcggtgga ggagctcggc cgccggctca aaagagctgt gtctgaacat cagctccttc 300

atgacaaggg gaaatctatc caagacttac ggcgacgatt cttccttcat cacctgattg 360

cagaaatcca cacagcagaa atcagagcta cctcggaggt ttcccccaac tccaagcctg 420

ctcccaacac aaagaaccac cccgtccgat ttgggtctga tgatgagggc agatacctaa 480

ctcaggaaac caacaaggtg gagacataca aggagcagcc actgaagaca cctggcaaga 540

aaaagaaagg caaacccgga aaacgcaagg agcaggaaaa aaagaaacgt cgaactcggt 600

ctgcctggct aaactctggc gtggctgaaa gtgggctaga aggcgaccac ccatatgaca 660

tctcagcgac atcgctggag ctcaatttac ggaggcattg aaatttttag caaagacctt 720

caaaggacgt attacaggat tctgtaatag tgaacatatg gaaagtatta gaaatattta 780

ttgtctgtaa atactgtaaa tgcattggaa taaaactgtc ttccccattg ctctatgaaa 840

ctgcacattg gtcattgtga atatttttt ttgccaaggc taatccaatt attattatca 900

catttaccat aatttatttt gtcaactgat gtatttattt tgtaaatgta tcttggtgct 960

gctgaatttc tctatttttt gtaacataat gcactttagg tatacatatc aagtatgttg 1020

ataaatgaca caataaagtg tctttatttt gtggttgatt ttaataatgc ctaaatataa 1080

ttatccaaac tgattttcct ctgtgcatgt aaaaatagca gtattttaaa tttgtaaaga 1140

atgtctaata aaatataatc taaatt 1166

<210> 66
<211> 175
<212> PRT
<213> Mus musculus

<400> 66

Met Leu Arg Arg Leu Val Gln Gln Trp Ser Val Leu Val Phe Leu Leu
1 5 10 15

Ser Tyr Ser Val Pro Ser Arg Gly Arg Ser Val Glu Gly Leu Gly Arg
20 25 30

Arg Leu Lys Arg Ala Val Ser Glu His Gln Leu Leu His Asp Lys Gly
35 40 45

Lys Ser Ile Gln Asp Leu Arg Arg Arg Phe Phe Leu His His Leu Ile
50 55 60

Ala Glu Ile His Thr Ala Glu Ile Arg Ala Thr Ser Glu Val Ser Pro
65 70 75 80

Asn Ser Lys Pro Ala Pro Asn Thr Lys Asn His Pro Val Arg Phe Gly
85 90 95

Ser Asp Asp Glu Gly Arg Tyr Leu Thr Gln Glu Thr Asn Lys Val Glu
100 105 110

Thr Tyr Lys Glu Gln Pro Leu Lys Thr Pro Gly Lys Lys Lys Lys Gly
115 120 125

Lys Pro Gly Lys Arg Arg Glu Gln Glu Lys Lys Lys Arg Arg Thr Arg
130 135 140

Ser Ala Trp Pro Ser Thr Ala Ala Ser Gly Leu Leu Glu Asp Pro Leu
145 150 155 160

Pro His Thr Ser Arg Thr Ser Leu Glu Pro Ser Leu Arg Thr His
165 170 175

<210> 67
<211> 971
<212> DNA
<213> Mus musculus

<400> 67

ggatcctgcc tgcctctttc acatctttat tgagtgttgt ccggtctgca agagagatta 60

atctctttct tccccttcct tgtcttcaca ggacgcattg aaattttcat cgaagatctt 120

ccaaggacac gttacaggat tttgtaatag taaacatatg gaaagtatta gacatattta 180

ttgcctgtac atactgtaaa tgcattggga tcaaactgtc tccccaggaa actgcacatg 240

ggtcatgtga atatttttcc cttttgccaa ggctaatcca attattcctg tcactgttac 300

cataatttat tttgtcaact gatgtattta tttgtaaatg tatcttggtg ctgctgactc 360

tgtttttttg taacataatg cactttaggt atacatatcg agtatgtgga tgaatttaac 420

acataaaagg atctctattt tgtggttcat tttaatgagt tctgaaatat aattatctag 480

actgatttcc ttctgtgcat gtaaaaatgg cagtatttta aatttgttaa ataatgtcta 540

ataaaatata atctaattat accatgactc acaatgtgaa ttttattctt taaagtttct 600

aatcagagaa acacaacaca attttttttа attctacttg aatataatcc taaacttaat 660

atgtttatat gggccatcta ttccaatgtg tccacattag cttttagtta aaaaccactt 720

aaaatgtatt ctgtccaata tttcagttca agtcaataaa atggctgaac agcctgaact 780

tcaagttgaa ataatggcaa caaagggcaa aaataaataa gtagagaagt cagaagaaaa 840

ggtcaaagag gttatccaga gttaaaacca gagggagagg tggacccaag actttgactc 900

tgaataaatt ttgccaatat aaagtttagt ttgcaagggc ttgtctcatt cataacaata 960

atgaaagatc t 971

<210> 68
<211> 175
<212> PRT
<213> Mus musculus

<400> 68

Met Leu Arg Arg Leu Val Gln Gln Trp Ser Val Leu Val Phe Leu Leu
1 5 10 15

Ser Tyr Ser Val Pro Ser Arg Gly Arg Ser Val Glu Gly Leu Gly Arg
20 25 30

Arg Leu Lys Arg Ala Val Ser Glu His Gln Leu Leu His Asp Lys Gly
35 40 45

Lys Ser Ile Gln Asp Leu Arg Arg Arg Phe Phe Leu His His Leu Ile
50 55 60

Ala Glu Ile His Thr Ala Glu Ile Arg Ala Thr Ser Glu Val Ser Pro
65 70 75 80

Asn Ser Lys Pro Ala Pro Asn Thr Lys Asn His Pro Val Arg Phe Gly
85 90 95

Ser Asp Asp Glu Gly Arg Tyr Leu Thr Gln Glu Thr Asn Lys Val Glu
100 105 110

Thr Tyr Lys Glu Gln Pro Leu Lys Thr Pro Gly Lys Lys Lys Lys Gly
115 120 125

Lys Pro Gly Lys Arg Arg Glu Gln Glu Lys Lys Lys Arg Arg Thr Arg
130 135 140

Ser Ala Trp Pro Ser Thr Ala Ala Ser Gly Leu Leu Glu Asp Pro Leu
145 150 155 160

Pro His Thr Ser Arg Thr Ser Leu Glu Pro Ser Leu Arg Thr His
165 170 175

<210> 69
<211> 935
<212> DNA
<213> Mus musculus

<400> 69
cctaggtctc ccattcctat ctcccctccc tactctaaaa gccagctact tgccagttat 60

tccttcaagg aagccacggg aaggacctct gctgacaact tgtcttctcc cctaacagca 120

aacgcgctgt gtctgaacat cagctactgc atgacaaggg caagtccatc caagacttgc 180

gccgccgttt cttcctccac catctgatcg cggagatcca cacagccgaa atcagagcta 240

cctcggaggt gtcccccaac tccaaacctg ctcccaacac caaaaaccac cccgtgcggt 300

ttgggtcaga cgatgagggc agatacctaa ctcaggaaac caacaaggtg gagacgtaca 360

aagaacagcc actcaagaca cccgggaaga agaagaaagg caagcctggg aaacgcagag 420

aacaggagaa aaagaagcga aggactcggt ctgcctggcc aagcacagct gcgagtggcc 480

tgcttgagga ccccctgccc cacacctcca ggacctcgct ggagcccagc ttaaggtact 540

gttcactgtg ttcagcaggg ctcccctgcc tgcctctatc ttggtttcag agaccccgat 600

tttctgtatc ttgatctgtg atttaaaacc agtataggcc acaccagtcc tagtccttat 660

taccctgcta gacaatttaa tttccctaca tctctctccc caccaaccta cctacctacc 720

tacctacctt cctttcttcc tccctccctc cctccctccc tccctccctc ctttccttcc 780

ttccttccct ccccccttcct tcttcacttc ctccccatcc tctctcctct cttcctccct 840

cctcccttca ctccctcctc cctccctcct cctccccttc ctatcttact cccacacaca 900

cagggtcttc ctcacagcca agactgactg agctc 935

<210> 70
<211> 175
<212> PRT
<213> Mus musculus

<400> 70

Met Leu Arg Arg Leu Val Gln Gln Trp Ser Val Leu Val Phe Leu Leu
1 5 10 15

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Ser Tyr Ser Val Pro Ser Arg Gly Arg Ser Val Glu Gly Leu Gly Arg
            20                  25                  30

Arg Leu Lys Arg Ala Val Ser Glu His Gln Leu Leu His Asp Lys Gly
        35                  40                  45

Lys Ser Ile Gln Asp Leu Arg Arg Arg Phe Phe Leu His His Leu Ile
    50                  55                  60

Ala Glu Ile His Thr Ala Glu Ile Arg Ala Thr Ser Glu Val Ser Pro
65                  70                  75                  80

Asn Ser Lys Pro Ala Pro Asn Thr Lys Asn His Pro Val Arg Phe Gly
                85                  90                  95

Ser Asp Asp Glu Gly Arg Tyr Leu Thr Gln Glu Thr Asn Lys Val Glu
            100                 105                 110

Thr Tyr Lys Glu Gln Pro Leu Lys Thr Pro Gly Lys Lys Lys Lys Gly
        115                 120                 125

Lys Pro Gly Lys Arg Arg Glu Gln Glu Lys Lys Lys Arg Arg Thr Arg
    130                 135                 140

Ser Ala Trp Pro Ser Thr Ala Ala Ser Gly Leu Leu Glu Asp Pro Leu
145                 150                 155                 160

Pro His Thr Ser Arg Thr Ser Leu Glu Pro Ser Leu Arg Thr His
                165                 170                 175
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<210> 71
<211> 1869
<212> DNA
<213> Mus musculus

<400> 71

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aagctttaac tgctggcgag cagcaaggct taggggaggg gaggggtgag aagtcctagg     60

agtacccacc ccagaagtct gtagagcatc acagcccagg tctgacaaag gtctttgagt    120

gacactagcc tcctagagag tcagatgaaa ttttccagca gtattgtcta gaaggcaaac    180

ttctttgagt ggttcccatg ttcatttcag cgtgatctag gacctggggg gaaactagta    240

ttcacacaca cacacacaca cacacacaca cacacacaca cacacacacc tctagaccca    300

caatcagtaa ctcacaactt tctcccccac cccccacccc cactccctgc ccagcagcac    360

tgagaagctg aagcaaatgg gcactcagtg aatctttatc aggacatgag taggttatca    420

gaagaaggtg agaaagaagg actctgcgca ttccaggtcg tctgtgatca caaagtgggt    480

cttcttcctt gctcacacac ccggttctac cacctgctcc agacgtggat gtccccaacc    540

cttcccaaac agtaagaccc aaaactgcct ttgctcttct gggtggctag gtttagtccc    600

tccccaggag aaggccacac caggcaggaa tgcagtaatg cgagcttgca acccggggtt    660
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cctccttgct gtttgtaggg acctggactc ctggacctgc cactcaggcg acagcaggcc 720

ggttcaggag gaggagagcg tcagatcgcc cacgcgggcc aggactgggg tggggctccg 780

tggctccggg ctcccctgtg ctccccgccc ccgccggccc gctcacccct gcctgctccg 840

ccggcgcgcg ttcctcgggc gccacctctt tgcgactcgc tcacttctca gcaggttggc 900

cccggagcgt gtgaaccttc cagggctggg ctcacagcta ctctccaacc tgcgccgccc 960

cagctgggcc gctccgcccc gctgccggaa cccgccctcg cgccacctgg cctcgcatcc 1020

acgacacgcg cgcctgcaac ttgttcaagg gcgttgtgga atcaactttc cggaagcaac 1080

cagcccaccg aaggaggtag accgacagct atgtatatat acgcgctctg ccgcaagtgg 1140

ctgtgcaccc agaggcccgg tgcgcaggac agctgactcc tgaggaacac ccgcgtttga 1200

agaggggttt gacctgcccc acgacccaga gtgctgccgc caagactaat tagacattgc 1260

tatgggagcc acagcaacgc gccacgcatc cccgacgcct atgtaaaacg cccggttttc 1320

gctcttcttt cagaggaagc tctctgattg ctttttcccc tctcgggtcc ctttttgcct 1380

gtgcggtttg agagaggcgc agttagaggc gctgattcct acacaagtaa gtgctcaggg 1440

gctcggagac actttttttgc tttctttttc ttgttttctt ttttcctcct aacttgtgag 1500

atgccctcga ctttggagtg gctgttggga agccacgggg ttccaaaaga gggagcgggg 1560

cagtgcgagg aagagatgga gagccgggac tgaccctcgg gttccactct tgcaggtccc 1620

cagagccagc gagcggcacg atgctgcgga ggctggttca gcagtggagt gtcctggtat 1680

tcctgctcag ctactccgtg ccctcccgcg ggcgttcggt ggaggggctt ggccgcaggc 1740

tgtaagtacc ggtcttcctc ctggggtgag gggtggggaa gaccagcgcc agctgaggcg 1800

ggcgatgctg aggaagccat ggggtccctg atggtcccaa cctgagttgg acacagtcca 1860

cggggtacc 1869

<210> 72
<211> 177
<212> PRT
<213> Homo sapiens

<400> 72

Met Gln Arg Arg Leu Val Gln Gln Trp Ser Val Ala Val Phe Leu Leu
1 5 10 15

Ser Tyr Ala Val Pro Ser Cys Gly Arg Ser Val Glu Gly Leu Ser Arg
20 25 30

Arg Leu Lys Arg Ala Val Ser Glu His Gln Leu Leu His Asp Lys Gly
35 40 45

Lys Ser Ile Gln Asp Leu Arg Arg Arg Phe Phe Leu His His Leu Ile
50 55 60

Ala Glu Ile His Thr Ala Glu Ile Arg Ala Thr Ser Glu Val Ser Pro
65 70 75 80

Asn Ser Lys Pro Ser Pro Asn Thr Lys Asn His Pro Val Arg Phe Gly
85 90 95

Ser Asp Asp Glu Gly Arg Tyr Leu Thr Gln Glu Thr Asn Lys Val Glu
100 105 110

Thr Tyr Lys Glu Gln Pro Leu Lys Thr Pro Gly Lys Lys Lys Lys Gly
115 120 125

Lys Pro Gly Lys Arg Lys Glu Gln Glu Lys Lys Lys Arg Arg Thr Arg
130 135 140

Ser Ala Trp Leu Asp Ser Gly Val Thr Gly Ser Gly Leu Glu Gly Asp
145 150 155 160

His Leu Ser Asp Thr Ser Thr Thr Ser Leu Glu Leu Asp Ser Arg Arg
165 170 175

His

<210> 73
<211> 1025
<212> DNA
<213> Homo sapiens

<400> 73
gtcccgagcg cgagcggaga cgatgcagcg gagactggtt cagcagtgga gcgtcgcggt 60

gttcctgctg agctacgcgg tgccctcctg cgggcgctcg gtggagggtc tcagccgccg 120

cctcaaaaga gctgtgtctg aacatcagct cctccatgac aaggggaagt ccatccaaga 180

tttacggcga cgattcttcc ttcaccatct gatcgcagaa atccacacag ctgaaatcag 240

agctacctcg gaggtgtccc ctaactccaa gccctctccc aacacaaaga accaccccgt 300

ccgatttggg tctgatgatg agggcagata cctaactcag gaaactaaca aggtggagac 360

gtacaaagag cagccgctca agacacctgg gaagaaaaag aaaggcaagc ccgggaaacg 420

caaggagcag gaaaagaaaa aacggcgaac tcgctctgcc tggttagact ctggagtgac 480

tgggagtggg ctagaagggg accacctgtc tgacacctcc acaacgtcgc tggagctcga 540

ttcacggagg cattgaaatt ttcagcagag accttccaag gacatattgc aggattctgt 600

aatagtgaac atatggaaag tattagaaat atttattgtc tgtaaatact gtaaatgcat 660

tggaataaaa ctgtctcccc cattgctcta tgaaactgca cattggtcat tgtgaatatt 720

ttttttttg ccaaggctaa tccaattatt attatcacat ttaccataat ttattttgtc 780

cattgatgta tttatttttgt aaatgtatct tggtgctgct gaatttctat atttttgta 840

acataatgca ctttagatat acatatcaag tatgttgata aatgacacaa tgaagtgtct 900

ctattttgtg gttgatttta atgaatgcct aaatataatt atccaaattg attttccttc 960

gtgcatgtaa aaataacagt attttaaatt tgtaaagaat gtctaataaa atataatcta 1020

attac 1025

<210> 74
<211> 258
<212> PRT
<213> Leishmania major

<400> 74

Met Leu Val Ser Val Lys Pro Lys Pro Glu Val Ala Gly Thr Ala His
1 5 10 15

Val Pro Leu Gly Pro Thr Gly Thr Asn Val Arg Gly Ala Phe Pro Ile
20 25 30

Thr Ala Ala Ser Arg Ser Ala His Ala Met Phe Pro Ser Thr Trp Tyr
35 40 45

Ser Ala Leu Lys Pro Lys Ala Ala Tyr Tyr Phe Ala Lys Pro Asp Thr
50 55 60

Ser Ser Trp Lys Leu Ser Asp Phe Glu Leu Lys Asn Thr Leu Gly Thr
65 70 75 80

Gly Ser Phe Gly Arg Val Arg Ile Ala His Arg Lys Gly Thr Glu Glu
85 90 95

Tyr Tyr Ala Ile Lys Cys Leu Arg Lys Arg Glu Ile Ile Lys Met Lys
100 105 110

Gln Gln Gln His Val Ala Gln Glu Lys Gly Ile Leu Met Glu Leu Cys
115 120 125

His Pro Phe Ile Val Asn Met Met Cys Ser Phe Gln Asp Glu Lys Lys
130 135 140

Val Tyr Phe Leu Leu Glu Phe Val Met Gly Gly Glu Met Phe Thr His
145 150 155 160

Leu Arg Thr Ala Gly Arg Phe Pro Asn Asp Val Ala Lys Phe Tyr His
165 170 175

Ala Lys Leu Val Leu Ala Phe Glu Tyr Leu His Ser Leu Asp Val Ile
180 185 190

Tyr Arg Asp Leu Lys Pro Glu Asn Leu Leu Leu Asp Asn Lys Gly His
195 200 205

Val Lys Met Thr Asp Phe Gly Phe Ala Lys Lys Val Pro Asp Arg Thr
210 215 220

Phe Thr Leu Cys Gly Thr Pro Glu Tyr Leu Ala Pro Glu Val Ile Gln
225 230 235 240

Ser Lys Gly His Gly Lys Ala Val Asp Trp Trp Thr Met Gly Val Leu
245 250 255

Leu Tyr

<210> 75
<211> 838
<212> DNA
<213> Leishmania major

<400> 75
tttgacacag ccgatgtggg gtggcatcag ctcgggcact gctgattgca tctcactggc 60

gccatgctag tgagtgtgaa gccgaaacct gaggtggctg gcacagctca cgtacccctt 120

gggcccacgg ggacgaatgt gcgcggtgcg tttcccatca ccgctgcgtc cagatcggcg 180

catgctatgt ttcctagcac gtggtactcc gctttaaaac ccaaggccgc ttattacttc 240

gcaaagccag acacctccag ctggaaactc tcagatttcg aactgaagaa cacgctcggc 300

accggttcct tcggccgcgt gcgcatcgcc caccgcaagg gcacggagga gtactacgcg 360

atcaagtgcc tgagaaagcg cgagatcatc aagatgaagc agcagcagca cgttgcgcag 420

gaaaagggga tcctaatgga gctgtgtcac ccgttcatcg tgaacatgat gtgctccttc 480

caggacgaga agaaggtgta ctttctgctg gagtttgtca tgggcggcga gatgttcacg 540

cacctgcgca ctgccgggcg gttcccgaat gacgttgcga agttctacca cgcgaagctg 600

gtgcttgcgt tcgagtatct gcactcgctg gacgtgatct accgcgatct gaagccggag 660

aatctgctgc tggacaacaa ggggcatgtg aagatgacgg actttgggtt tgcgaagaag 720

gtgccggacc ggacgttcac gctgtgcggg acaccggagt accttgcgcc ggaggtgatc 780

cagagcaagg gccacgggaa ggcggtggac tggtggacga tgggcgtgct gctgtacg 838

<210> 76
<211> 381
<212> PRT
<213> Leishmania major

<400> 76

Met Leu Val Ser Val Lys Pro Lys Pro Glu Val Ala Gly Thr Ala His
1 5 10 15

Val Pro Leu Gly Pro Thr Gly Thr Asn Val Arg Gly Ala Phe Pro Ile
20 25 30

Thr Ala Ala Ser Arg Ser Ala His Ala Met Phe Pro Ser Thr Trp Tyr
35 40 45

```
Ser Ala Leu Lys Pro Lys Val Ala Cys Asn Phe Ala Lys Pro Asp Thr
    50                  55                  60

Ser Ser Trp Lys Leu Ser Asp Phe Glu Leu Lys Asn Thr Leu Gly Thr
65                  70                  75                  80

Gly Ser Phe Gly Arg Val Arg Ile Ala His Arg Lys Gly Thr Glu Glu
                85                  90                  95

Tyr Tyr Ala Ile Lys Cys Leu Arg Lys Arg Glu Ile Ile Lys Met Lys
            100                 105                 110

Gln Gln Gln His Val Ala Gln Glu Lys Gly Ile Leu Met Glu Leu Cys
        115                 120                 125

His Pro Phe Ile Val Asn Met Met Cys Ser Phe Gln Asp Glu Lys Lys
    130                 135                 140

Val Tyr Phe Leu Leu Glu Phe Val Met Gly Gly Glu Met Phe Thr His
145                 150                 155                 160

Leu Arg Thr Ala Gly Arg Phe Pro Asn Asp Val Ala Lys Phe Tyr His
                165                 170                 175

Ala Glu Leu Val Leu Ala Phe Glu Tyr Leu His Ser Leu Asp Val Ile
            180                 185                 190

Tyr Arg Asp Leu Lys Pro Glu Asn Leu Leu Leu Asp Asn Lys Gly His
        195                 200                 205

Val Lys Met Thr Asp Phe Gly Phe Ala Lys Lys Val Pro Asp Arg Thr
    210                 215                 220

Phe Thr Leu Cys Gly Thr Pro Glu Tyr Leu Ala Pro Glu Val Ile Gln
225                 230                 235                 240

Ser Lys Gly His Gly Lys Ala Val Asp Trp Trp Thr Met Gly Val Leu
                245                 250                 255

Leu Tyr Glu Phe Ile Ala Gly Tyr Pro Pro Phe Tyr Asp Asp Thr Pro
            260                 265                 270

Phe Arg Ile Tyr Glu Lys Ile Leu Ala Gly Arg Leu Lys Phe Pro Asn
        275                 280                 285

Trp Phe Asp Gly Arg Ala Arg Asp Leu Val Lys Gly Leu Leu Gln Thr
    290                 295                 300

Asp His Thr Lys Arg Leu Gly Thr Leu Lys Gly Gly Pro Ala Asp Val
305                 310                 315                 320
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Lys Asn His Pro Tyr Phe His Gly Ala Asn Trp Asp Lys Leu Tyr Ala
325 330 335

Arg Tyr Tyr Pro Ala Pro Ile Pro Val Arg Val Lys Ser Pro Gly Asp
340 345 350

Thr Ser Asn Phe Glu Lys Tyr Pro Asp Ser Pro Val Asp Arg Thr Pro
355 360 365

Ala Leu Thr Ser Ala Gln Gln Ala Glu Leu Lys Gly Phe
370 375 380

<210> 77
<211> 2333
<212> DNA
<213> Leishmania major

<400> 77
tctgtgcttg cgcgtctcca cgtgcgcgtt ttcaccgtat atctcctctg gggaggggtc 60

agacgtcgtc gcgagacgtc gcggttcctt tcgggaagtc cccgaaggca ggacgtccgt 120

accacttgtg aggtgtctgc tttgcattgc attccgccgt cgaggcacgg ctttctctcg 180

aacacgtcat tggcattcga acgggtgtct ttgctcgact ctttcgtggc gcacccgcaa 240

cgcaagcata cgacacacct tcgctagcga accgcaagag gacggcttgc agagaccaac 300

gtgtttttct tgatttctga gaccatttca gggctctctc tctctctctc tctcaacctc 360

ttccgtcccc catctctttg acacagccga tgtggggtgg catcagctcg ggcactgctg 420

attgcatctc actggcgcca tgctagtgag tgtgaagccg aaacctgagg tggctggcac 480

agctcacgta ccccttgggc ccacggggac gaatgtgcgc ggtgcgtttc ccatcaccgc 540

tgcgtccaga tcggcgcatg ctatgtttcc tagcacgtgg tactccgctt taaaacccaa 600

ggtcgcgtgc aacttcgcaa agccagacac ctccagctgg aaactctcag atttcgaact 660

gaagaacacg ctcggcaccg gttccttcgg ccgcgtgcgc atcgcccacc gcaagggcac 720

ggaggagtac tacgcgatca agtgcctgag aaagcgcgag atcatcaaga tgaagcagca 780

gcagcacgtt gcgcaggaaa aggggatcct aatggagctg tgtcacccgt tcatcgtgaa 840

catgatgtgc tccttccagg acgagaagaa ggtgtacttt ctgctggagt ttgtcatggg 900

cggcgagatg ttcacgcacc tgcgcactgc cgggcggttc ccgaatgacg ttgcgaagtt 960

ctaccacgcg gagctggtgc ttgcgttcga gtatctgcac tcgctggacg tgatctaccg 1020

cgatctgaag ccggagaatc tgctgctgga caacaagggg catgtgaaga tgacggactt 1080

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<210> 78
<211> 605
<212> PRT
<213> Mucor racemosus

<400> 78

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Ser Ser Pro Val Met Thr Ser Val Asn Met Gly Gln Leu Gly Glu Lys
20 25 30

Leu Arg Gln Ala Arg Thr Thr Thr Leu Ala Ser Leu Ser Gln Ala Leu
35 40 45

Ser Lys Lys Pro Glu Ala Ala Ala Ala Ala Ala Thr Ala Pro Asn Ala
50 55 60

Val Asn Glu Ser Thr Thr Thr Pro Thr Thr Met Gln Leu Pro Ala Ser
65 70 75 80

Glu Lys Ala Thr Ser Gln Leu Glu Ile Asn Val Val Glu Ala Arg Asn
85 90 95

Leu Thr Ile Ala Asp Ala Arg Lys Ala Asp Thr Tyr Cys Ile Val His
100 105 110

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Tyr Glu Gly Asn Thr Thr Ser Thr Leu Asp Lys Val Asp Asp Gly Ile
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Leu Pro Ser Thr Pro Leu Val Ile Lys Ser Gln Val Ala Ser Gly Ala
    130                 135                 140

Phe Lys Ala Phe Glu Ile Met Met Ser Ala Ser Ser Pro Lys Trp Met
145                 150                 155                 160

His Arg Val Asn Phe Asp Val Thr Ala Gly Asn Lys Glu Ile Thr Val
                165                 170                 175

Phe Val Tyr Asp Arg Gly Asn Lys Leu Pro Asn Gly Glu Asp Arg Phe
            180                 185                 190

Leu Gly Met Ser Ser Ile Val Pro Asn Leu Val Asn Lys Lys Thr Val
        195                 200                 205

Glu Leu Ile Phe Pro Leu His Gly Arg Pro Asp Asp Asp Gln Glu Val
    210                 215                 220

Thr Gly Asp Val Arg Leu Gln Val Thr Phe Ile Asp Pro Lys Lys Ala
225                 230                 235                 240

Asn Leu Lys Pro Glu Asp Phe Arg Ile Val Arg Met Ile Gly Gln Gly
                245                 250                 255

Ser Val Gly Lys Val Tyr Glu Val Ile Lys Arg Asp Ser Gly Arg Thr
            260                 265                 270

Tyr Ala Met Lys Val Leu Ser Lys Arg Leu Leu Leu Ala Glu Asn Glu
        275                 280                 285

Val Asp Thr Ala Phe Asn Glu Arg Asn Val Leu Val Gln Ser Leu Ser
    290                 295                 300

Ser Pro Phe Ile Ala Asn Leu Lys Tyr Ser Phe Gln Thr Thr Asn His
305                 310                 315                 320

Leu Phe Leu Val Met Asp Tyr Phe Pro Gly Gly Glu Leu Phe Asp Phe
                325                 330                 335

Leu Glu Arg Glu Arg Cys Leu Ser Glu Lys Arg Cys Gln Phe Phe Ala
            340                 345                 350

Ala Glu Ile Val Cys Ala Phe Asp Asn Ile His Ala Arg Asn Ile Val
        355                 360                 365

Tyr Arg Asn Leu Lys Pro Glu Ser Ile Leu Leu Asp Ala His Gly His
    370                 375                 380
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Ile Ala Leu Thr Asp Phe Gly Leu Cys Lys Gln Leu Lys Asn Lys Met
385 390 395 400

Asp Leu Ile Gln Gly Val Pro Gln Val Ile Thr Gln Glu Tyr Leu Ala
405 410 415

Pro Glu Met Val Met Gln Lys Pro Tyr Gly Met Ala Ala Asp Trp Trp
420 425 430

Ser Leu Gly Val Leu Met Phe Glu Leu Leu Thr Gly Ser Pro Pro Phe
435 440 445

His Ser Val Glu Gln Gly Glu Leu Phe Arg Gln Ile Leu Glu Ala Pro
450 455 460

Ile Lys Phe Pro Ala Gly Gly Cys Ile Thr Glu Glu Ala Lys Asp Phe
465 470 475 480

Ile Cys Gln Leu Leu Glu Arg Asp Pro Ala Lys Arg Leu Gly Ser His
485 490 495

Gly Asp Val Ala Gln Val Lys Ala His Pro Phe Phe Lys Asp Leu Asn
500 505 510

Trp Asp Val Val Tyr Lys Lys Gln Met Gln Leu Pro Phe Val Pro Glu
515 520 525

Val Glu Glu Gln Leu Arg Glu Glu Ala Ile Ala Ala Ala Ala Ala Ile
530 535 540

Ser Ile Pro Val Thr Asn Ser Lys Thr Glu Ser Thr Asn Ala Asn Val
545 550 555 560

Met Pro Val Ala Asp Gln Ser Lys Phe Lys Gly Phe Ser Tyr Ile Arg
565 570 575

Glu Asp Val Met Ala Lys Lys Gly Glu His Arg Leu Gly Val Asn Pro
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Glu Asp Glu Asp Pro Glu Val Asp Phe Trp Phe Arg Gln
595 600 605

<210> 79
<211> 2578
<212> DNA
<213> Mucor racemosus

<400> 79
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tcgcagatag acacacctaa aattatgcac tgttttgggt tacacattga ttttaggtaa 240

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cccctcctca ttcaataaag cacatatttg ttcatatacc aaaaaaaaaa aaaaaaaa 2578

<210> 80
<211> 349
<212> PRT
<213> Xenopus laevis

<400> 80

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Glu Phe Leu Ala Lys Ala Lys Glu Asp Phe Leu Arg Lys Trp Glu Thr
20 25 30

Pro Pro Gln Asn Thr Ala Ser Leu Asp Asp Phe Asp Arg Met Lys Thr
35 40 45

Leu Gly Thr Gly Ser Phe Gly Arg Val Met Leu Val Lys His Lys Gly
50 55 60

Ala Glu Gln Tyr Tyr Ala Met Lys Ile Leu Asp Lys Gln Lys Val Val
65 70 75 80

Lys Leu Lys Gln Ile Glu His Thr Leu Asn Glu Lys Arg Ile Leu Gln
85 90 95

Ala Val Asn Phe Pro Phe Leu Val Arg Leu Glu Tyr Ser Phe Lys Asp
100 105 110

Asn Ser Asn Leu Tyr Met Ile Met Glu Tyr Val Pro Gly Gly Glu Met
115 120 125

Phe Ser His Leu Arg Arg Ile Gly Arg Phe Ser Glu Pro His Ala Arg
130 135 140

Phe Tyr Ala Ala Gln Ile Val Leu Thr Phe Glu Tyr Leu His Ser Leu
145 150 155 160

Asp Leu Ile Tyr Arg Asp Leu Lys Pro Glu Asn Leu Leu Ile Asp Gln
165 170 175

Gln Gly Tyr Ile Gln Val Thr Asp Phe Gly Phe Ala Lys Arg Val Lys
180 185 190

Gly Arg Thr Trp Thr Leu Cys Gly Thr Pro Glu Tyr Leu Ala Pro Glu
195 200 205

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Ile Ile Leu Ser Lys Gly Tyr Asn Lys Ala Val Asp Trp Trp Ala Leu
    210                 215                 220

Gly Val Leu Ile Tyr Glu Met Ala Ala Gly Tyr Pro Pro Phe Phe Ala
225                 230                 235                 240

Asp Gln Pro Ile Gln Ile Tyr Glu Lys Ile Val Ser Gly Lys Val Arg
                245                 250                 255

Phe Pro Ser His Phe Ser Ser Asp Leu Lys Asp Leu Leu Arg Asn Leu
            260                 265                 270

Leu Gln Val Asp Leu Thr Lys Arg Tyr Gly Asn Leu Lys Asn Gly Val
        275                 280                 285

Asn Asp Ile Lys Asn His Lys Trp Phe Ala Thr Thr Asp Trp Ile Ala
    290                 295                 300

Ile Tyr Gln Arg Lys Val Glu Ala Pro Phe Ile Pro Lys Cys Arg Gly
305                 310                 315                 320

Pro Gly Asp Thr Ser Asn Phe Asp Asp Tyr Glu Gly Ser Phe His Leu
                325                 330                 335

Ser Leu Thr Glu Lys Cys Ala Lys Glu Phe Ala Asp Phe
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<210> 81
<211> 1994
<212> DNA
<213> Xenopus laevis

<400> 81

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tagatgattt tgatagaatg aaaacccttg gaactggctc atttggaaga gttatgttag    180

tgaaacataa aggtgcagag cagtattatg ctatgaagat actggataaa cagaaggtgg    240

tgaagctgaa acaaatagag catacattaa atgaaaagag gatattgcag gcagtgaact    300

ttcctttcct tgtcaggttg gaatattcct ttaaggataa ctctaattta tatatgatta    360

tggaatatgt ccctggggga gaaatgtttt cacatttaag aaggattggc aggttcagtg    420

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tagaccttat ctacagagat ctcaaaccag aaaatctttt aattgaccag caaggataca    540

ttcaggtcac agattttggg tttgccaaaa gagtaaaggg tagaacttgg acattatgtg    600

gaacgccaga gtatctggca ccagaaatta ttttaagcaa gggttataac aaagcagttg    660

actggtgggc attaggagtt ttaatatatg aaatggctgc tggttatccc cctttctttg    720
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aaaaaaaaaa aaaa 1994

<210> 82
<211> 351
<212> PRT
<213> Xenopus laevis

<400> 82

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Lys Glu Phe Leu Ala Lys Ala Lys Glu Asp Phe Leu Lys Lys Trp Glu
20 25 30

Ser Pro Ala Gln Asn Thr Ala Asn Leu Asp Gln Phe Glu Arg Met Lys
35 40 45

Thr Leu Gly Thr Gly Ser Phe Gly Arg Val Met Leu Val Arg His Lys
50 55 60

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Glu Asn Gly Ser His Phe Ala Met Lys Ile Leu Asp Lys Gln Lys Val
65                  70                  75                  80

Val Lys Leu Lys Gln Ile Glu His Thr Leu Asn Glu Lys Arg Ile Leu
                85                  90                  95

Gln Ala Val Asn Phe Pro Phe Leu Val Arg Leu Glu Tyr Ser Phe Lys
            100                 105                 110

Asp Asn Thr Asn Leu Tyr Met Val Met Glu Tyr Val Ala Gly Gly Glu
        115                 120                 125

Met Phe Ser His Leu Arg Arg Ile Gly Arg Phe Ser Glu Pro His Ala
    130                 135                 140

Arg Phe Tyr Ala Ser Gln Ile Val Leu Thr Phe Glu Tyr Leu His Ala
145                 150                 155                 160

Leu Asp Leu Ile Tyr Arg Asp Leu Lys Pro Glu Asn Leu Leu Ile Asp
                165                 170                 175

Gln Gln Gly Tyr Ile Gln Val Thr Asp Phe Gly Phe Ala Lys Arg Val
            180                 185                 190

Lys Gly Arg Thr Trp Thr Leu Cys Gly Thr Pro Glu Tyr Leu Ala Pro
        195                 200                 205

Glu Ile Ile Leu Ser Lys Gly Tyr Asn Lys Ala Val Asp Trp Trp Ala
    210                 215                 220

Leu Gly Val Leu Ile Tyr Glu Met Ala Ala Gly Tyr Pro Pro Phe Phe
225                 230                 235                 240

Ala Asp Gln Pro Ile Gln Ile Tyr Glu Lys Ile Val Ser Gly Lys Val
                245                 250                 255

Arg Phe Pro Ser His Phe Ser Ser Asp Leu Lys Asp Leu Leu Arg Asn
            260                 265                 270

Leu Leu Gln Val Asp Leu Thr Lys Arg Phe Gly Asn Leu Lys Asn Gly
        275                 280                 285

Val Thr Asp Ile Lys Gly His Lys Trp Phe Ser Thr Thr Asp Trp Ile
    290                 295                 300

Ala Val Tyr Gln Lys Lys Val Glu Ala Pro Phe Ile Pro Lys Cys Lys
305                 310                 315                 320

Gly Pro Gly Asp Thr Ser Asn Phe Asp Asp Tyr Glu Glu Glu Glu Ile
                325                 330                 335
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Arg Val Ser Ile Thr Glu Lys Cys Ala Lys Glu Phe Ser Asp Phe
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<210> 83
<211> 2737
<212> DNA
<213> Xenopus laevis

<400> 83
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acccagaagt aacggactga tttctcatcg caggtcttaa acttattggt ggggggcgtt 180

tgtccagaat ttagagggcc cgtccgcccc ccaccatggg caacgcggct accacaaaga 240

agggtggcga gattgaaagt gtgaaagaat ttctggcaaa agcaaaagaa gattttctga 300

aaaaatggga gagtccagca cagaacacag caaatctgga ccagtttgag cgaatgaaaa 360

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cgttgaatga gaaacggata ctgcaggctg tgaatttccc attccttgtg cggctggagt 540

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cccagattgt attaactttc gaatatctac acgccctgga tcttatatac agagacttga 720

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<211> 309
<212> PRT
<213> Trypanosoma cruzi

<400> 84

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20 25 30

Arg Val Arg Ile Ala Lys Leu Lys Gly Thr Asn Asp Tyr Tyr Ala Val
35 40 45

Lys Cys Leu Lys Lys Arg Glu Ile Leu Lys Met Lys Gln Val Gln His
50 55 60

Ile Ser Gln Glu Lys Gln Ile Leu Met Glu Leu Ser His Pro Phe Ile
65 70 75 80

Val Asn Met Met Cys Ser Phe Gln Asp Asp Arg Arg Val Tyr Phe Val
85 90 95

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Leu Glu Phe Val Val Gly Gly Glu Met Phe Thr His Leu Arg Ser Ala
            100                 105                 110

Gly Arg Phe Pro Asn Asp Val Ala Lys Phe Tyr His Ala Glu Ile Val
        115                 120                 125

Leu Ala Phe Glu Tyr Leu His Ser Lys Asp Ile Ile Tyr Arg Asp Leu
    130                 135                 140

Lys Pro Glu Asn Leu Leu Leu Asp Ser Lys Gly His Val Lys Val Thr
145                 150                 155                 160

Asp Phe Gly Phe Ala Lys Lys Val Pro Glu Arg Thr Phe Thr Leu Cys
                165                 170                 175

Gly Thr Pro Glu Tyr Leu Ala Pro Glu Val Ile Gln Ser Lys Gly His
            180                 185                 190

Gly Lys Ala Val Asp Trp Trp Thr Met Gly Val Leu Leu Tyr Glu Phe
        195                 200                 205

Ile Ala Gly Tyr Pro Pro Phe Tyr Asp Asp Thr Pro Phe Arg Thr Tyr
    210                 215                 220

Glu Lys Ile Leu Ser Gly Arg Phe Lys Phe Pro Ser Trp Phe Asp Ala
225                 230                 235                 240

Arg Ala Arg Asp Leu Val Lys Gly Leu Leu Gln Thr Asp His Thr Lys
                245                 250                 255

Arg Asn Trp Glu Lys Leu Tyr Ala Arg Tyr Tyr Pro Ala Pro Ile Pro
            260                 265                 270

Val Lys Ala Lys Ser Pro Gly Asp Thr Ser Asn Phe Glu Arg Tyr Pro
        275                 280                 285

Glu Ser Gln Glu Asp Arg Ala Val Pro Leu Thr Ala Thr Gln Gln Ala
    290                 295                 300

Glu Phe Ile Gly Phe
305
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<210> 85
<211> 1318
<212> DNA
<213> Trypanosoma cruzi

<400> 85
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cgtttcttag attacttcta tgacttcatt tccctacttt gtttcttttt cttatataca 180

tatacatatg tgcatctaag attgggcatt tttccttcct tataaaagag cccacacaga 240

taattttaac agcatttttg aaaaataggt actggcgact tgccaagaag gagacgacag 300

ttataaacaa catgtcaggg gaggcaaatt atgaaaagcc ggacacctca aattggaagt 360

tagcagactt tgagatgggc gacacgttag ggacgggttc ttttggtcgc gtgcgcattg 420

ctaaactgaa gggcaccaat gactattatg cggtgaagtg cttgaagaag cgggagattt 480

taaagatgaa gcaggtccaa cacataagcc aagaaaagca aattttaatg gagctttcac 540

acccgttcat tgtgaacatg atgtgttcct ttcaggatga tcgccgggtg tactttgtgt 600

tggagtttgt ggtgggcggg gagatgttta ctcaccttcg ctccgccggt cggtttccaa 660

acgatgtagc aaagttctac cacgcggaga ttgtgcttgc cttcgaatac ctgcactcga 720

aggacatcat ctaccgtgac ctgaagccgg agaaccttct gctggacagc aagggccacg 780

tgaaggtgac tgactttggg tttgcgaaga aggtgccgga acgtaccttc acgctgtgtg 840

ggacaccgga gtaccttgcg cccgaggtga ttcagagcaa gggtcatggg aaggccgtgg 900

actggtggac gatgggcgtt ctgctgtacg aatttattgc tgggtatcct ccgttttacg 960

acgacacgcc gttccgcacg tacgagaaga tcctctctgg gcgcttcaag tttccgagtt 1020

ggtttgatgc gcgtgcgcgg gatcttgtga aggggcttct gcaaacggac cacacgaagc 1080

gtaactggga gaagttgtat gcgcgatact accctgcccc gatccctgtg aaggcaaaga 1140

gccctggcga cacgagtaac tttgagcgtt accctgaaag ccaggaagat cgagcggtgc 1200

cgctaaccgc tacgcaacag gcggagttta ttgggttcta aacgttttta cttttataaa 1260

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<210> 86
<211> 332
<212> PRT
<213> Leishmania major

<400> 86

Met Ile Thr Lys Ala Glu Ala Ser Gln Trp Arg Leu Ser Asp Leu Glu
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Met Arg Glu Thr Val Gly Thr Gly Thr Phe Gly Arg Val Arg Leu Val
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Lys His Lys Gly Thr Gly Gln Tyr Ala Ala Leu Lys Ile Leu Lys Lys
35 40 45

Gln Glu Ile Leu Arg Met Lys Gln Val Asp His Val Met Ala Glu Ala
50 55 60

Ser Leu Leu Gln Glu Ile Asp His Pro Phe Ile Val Ser Met Leu Arg
65 70 75 80

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Gly Tyr Met Asp Lys Asn Arg Leu Tyr Ile Leu Leu Glu Tyr Val Val
                85                  90                  95

Gly Gly Glu Leu Phe Ser His Leu Arg Lys Ala Gly Lys Phe Pro Asn
            100                 105                 110

Asp Val Ser Lys Phe Tyr Cys Ala Glu Val Ile Leu Ala Phe Asp Tyr
        115                 120                 125

Leu His Asn Lys Thr Ile Val Tyr Arg Asp Leu Lys Pro Glu Asn Ile
    130                 135                 140

Leu Leu Asp Gln Asp Gly Asn Ile Lys Ile Thr Asp Phe Gly Phe Ala
145                 150                 155                 160

Lys Arg Val Thr Glu Arg Thr Phe Thr Leu Cys Gly Thr Pro Glu Tyr
                165                 170                 175

Leu Ala Pro Glu Ile Ile Gln Ser Lys Gly His Asn Lys Ala Val Asp
            180                 185                 190

Trp Trp Ala Leu Gly Ile Leu Leu Tyr Glu Met Leu Val Gly Tyr Pro
        195                 200                 205

Pro Phe Phe Asp Asp Ser Pro Met Lys Ile Tyr Glu Lys Ile Leu Val
    210                 215                 220

Gly Lys Val Leu Phe Pro Arg Trp Val Asp Ser Lys Ala Arg Asp Phe
225                 230                 235                 240

Ile Lys Gly Leu Leu Ser Leu Asp Pro Thr Lys Arg Leu Gly Asn Leu
                245                 250                 255

Pro Asn Gly Thr Glu Asp Ile Lys Asn His Lys Tyr Phe Ala Glu Val
            260                 265                 270

Asp Trp Asn Val Val Leu Ser Lys Lys Ile Pro Ala Pro Ile Pro Val
        275                 280                 285

Arg Gln His Lys Glu Gly Asp Thr His Tyr Phe Asp Lys Tyr Pro Asp
    290                 295                 300

Ser Pro Leu Asn Pro Leu Arg Thr Leu Thr Pro Ala Gln Gln Asp Cys
305                 310                 315                 320

Phe Ala Asn Phe Cys Asn Gly Gln Tyr Thr Asp Glu
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<210> 87
<211> 3461
<212> DNA

<213> Leishmania major

<400> 87

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caaagggaat ccagatgcac tgcgtcagat cgaagagggc tggaacacac tgccccacac 240

gtcaggcatc agctttccca agttctttta gcatcacgtc tttacacgga agcgagcaga 300

aatggcagac aacttcctcc tccgggtacc acgactatcg actcctcttt ctgtttttcc 360

atctcttcct ttgcaaggtg acctcgagtg catttcgttg ctgctaacaa aaaagctcta 420

gcgatgcgcc ggcgacgtgc tgtatttgct atatcttcat cacaggagtg gcatttctgg 480

cctgtggtgc gccgcaacag agacagtttc ctgtgtcatg ttcatctccc agcagaggtt 540

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actgcgggag tgagttttat gtgtggtcgc gcattagaac a 3461

<210> 88
<211> 359
<212> PRT
<213> Giardia intestinalis

<400> 88

Met Glu Asp Ile Gln Val Glu Ala Tyr Pro Glu Leu Ser Tyr Lys Asp
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Leu Arg His Ile Lys Asn Ile Gly Ser Gly Ser Phe Gly Arg Val Thr
20 25 30

Leu Ala Gln His Ile Asp Thr Gly Lys Tyr Tyr Ala Val Lys Ala Met
35 40 45

Ser Lys Arg Lys Ile Ile Ala Leu Arg Gln Val Ala His Ile Asn Asn
50 55 60

Glu Cys Ser Ile Leu Arg Val Val Arg Ser Pro Phe Ile Ile Arg Gln
65 70 75 80

Tyr Gly Thr Tyr Gln Asp Asp Lys Asn Val Tyr Ile Ile Leu Asp Phe
85 90 95

Ile Gln Gly Gly Glu Leu Phe Tyr His Leu Arg Arg Tyr Asn Lys Phe
100 105 110

Pro Leu Gln Val Val Lys Phe Phe Ala Val Glu Ile Leu Leu Ala Leu
115 120 125

Gly Tyr Leu His Asn Leu Gly Ile Ala Tyr Arg Asp Leu Lys Leu Glu
130 135 140

Asn Val Leu Val Asp Asn Thr Gly His Ile Lys Leu Ala Asp Leu Gly
145 150 155 160

Phe Ala Lys Arg Leu Val Glu Lys Asn Ala Asp Gly Asp Thr Val Ser
165 170 175

Gln Leu Thr Phe Ser Ile Val Gly Thr Pro Glu Tyr Leu Ala Pro Glu
180 185 190

Ile Ile Arg Ser Thr Gly His Asp Met Ser Ala Asp Trp Trp Ala Phe
195 200 205

Gly Val Leu Ile Tyr Glu Met Leu Thr Gly Ser Pro Pro Phe Phe Asp
210 215 220

Asp Asn Pro Asp Met Thr Cys Lys Lys Ile Leu Gly Gly Lys Ile Thr
225 230 235 240

Phe Ala Ser Gly Phe Asp Lys Ala Ala Lys Asp Leu Ile Ile Arg Leu
245 250 255

Leu Asn Pro Asp Lys Thr Arg Arg Leu Gly Ala Ser Ile Asn Asn Gly
260 265 270

Thr Ala Asp Ile Met Lys His Ala Phe Phe Ser Gly Val Asn Cys Leu
275 280 285

Gly Leu Arg Lys Lys Ser Gly Arg His Pro Ile Val Pro Lys Leu Thr
290 295 300

Asp Pro Ala Asp Thr Ala Asn Tyr Glu Asp Tyr Leu Asp Glu Asn Gly
305 310 315 320

Asn Phe Glu Glu Asp Glu Ile Asp Tyr Glu Asn Leu Arg Ser Asp Ala
325 330 335

Ala Glu Leu Gly Leu Ala Glu Ile Pro Gly Thr Gln Glu Glu Lys Asp
340 345 350

Ala Leu Phe Val Gly Phe Lys
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<210> 89
<211> 1307
<212> DNA
<213> Giardia intestinalis

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cacattgaca caggaaagta ctacgccgtg aaggcaatgt ccaagcggaa gattattgcc 180

cttcggcagg ttgctcacat taacaacgag tgtagtatct tgcgtgtcgt gaggtctccg 240

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ttcatccagg gcggcgagct tttctatcac ctacgcagat ataacaaatt tccactccaa 360

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cttgctgatc tggggtttgc taagcgcctg gtcgagaaga atgcagacgg ggatacggtg 540

tcccaactta ctttcagtat cgtgggcacc ccagaatact tggcccccga aattatccga 600

tcgaccgggc acgatatgtc tgcagattgg tgggccttcg gcgtcctcat atatgagatg 660

ctaacagggt ctccgccctt cttcgatgac aatcctgata tgacctgtaa gaagatcctt 720

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ttactcaacc ctgacaaaac aaggagattg ggggcatcta taaacaacgg cacggcagac 840

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gcggccgagc tgggcctggc agagatacct gggactcagg aagaaaaaga cgccctgttt 1080

gtgggattta ataggtgcg tgacccttga cataaaacaa aaccctacct tacttattaa 1140

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<210> 90
<211> 333
<212> DNA
<213> Trichinella spiralis

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<223> n is a, c, g, or t

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<222> (59)..(59)
<223> n is a, c, g, or t

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atccgggcga cacttagcaa tgtttgacga aatacgaaga agaagcgttg cacatttcac 180

cggtggacaa atgtgtcaaa gaatttgctg atttttgaat ttatagactc gccgtggatt 240

tcaaatcttt tttgttagtc gtcgtattaa aaacagaaaa atattaataa taataataat 300

aagacaaaga gaggcaaatt cattttgcgg act 333

<210> 91
<211> 351
<212> PRT
<213> Homo sapiens

<400> 91

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Lys Glu Phe Leu Ala Lys Ala Lys Glu Asp Phe Leu Lys Lys Trp Glu
20 25 30

Ser Pro Ala Gln Asn Thr Ala His Leu Asp Gln Phe Glu Arg Ile Lys
35 40 45

Thr Leu Gly Thr Gly Ser Phe Gly Arg Val Met Leu Val Lys His Lys
50 55 60

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Glu Thr Gly Asn His Tyr Ala Met Lys Ile Leu Asp Lys Gln Lys Val
65                  70                  75                  80

Val Lys Leu Lys Gln Ile Glu His Thr Leu Asn Glu Lys Arg Ile Leu
                85                  90                  95

Gln Ala Val Asn Phe Pro Phe Leu Val Lys Leu Glu Phe Ser Phe Lys
            100                 105                 110

Asp Asn Ser Asn Leu Tyr Met Val Met Glu Tyr Val Pro Gly Gly Glu
        115                 120                 125

Met Phe Ser His Leu Arg Arg Ile Gly Arg Phe Ser Glu Pro His Ala
    130                 135                 140

Arg Phe Tyr Ala Ala Gln Ile Val Leu Thr Phe Glu Tyr Leu His Ser
145                 150                 155                 160

Leu Asp Leu Ile Tyr Arg Asp Leu Lys Pro Glu Asn Leu Leu Ile Asp
                165                 170                 175

Gln Gln Gly Tyr Ile Gln Val Thr Asp Phe Gly Phe Ala Lys Arg Val
            180                 185                 190

Lys Gly Arg Thr Trp Thr Leu Cys Gly Thr Pro Glu Tyr Leu Ala Pro
        195                 200                 205

Glu Ile Ile Leu Ser Lys Gly Tyr Asn Lys Ala Val Asp Trp Trp Ala
    210                 215                 220

Leu Gly Val Leu Ile Tyr Glu Met Ala Ala Gly Tyr Pro Pro Phe Phe
225                 230                 235                 240

Ala Asp Gln Pro Ile Gln Ile Tyr Glu Lys Ile Val Ser Gly Lys Val
                245                 250                 255

Arg Phe Pro Ser His Phe Ser Ser Asp Leu Lys Asp Leu Leu Arg Asn
            260                 265                 270

Leu Leu Gln Val Asp Leu Thr Lys Arg Phe Gly Asn Leu Lys Asn Gly
        275                 280                 285

Val Asn Asp Ile Lys Asn His Lys Trp Phe Ala Thr Thr Asp Trp Ile
    290                 295                 300

Ala Ile Tyr Gln Arg Lys Val Glu Ala Pro Phe Ile Pro Lys Phe Lys
305                 310                 315                 320

Gly Pro Gly Asp Thr Ser Asn Phe Asp Asp Tyr Glu Glu Glu Glu Ile
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Arg Val Ser Ile Asn Glu Lys Cys Gly Lys Glu Phe Ser Glu Phe
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<210> 92
<211> 2685
<212> DNA
<213> Homo sapiens

<400> 92
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tcagaacaca gcccacttgg atcagtttga acgaatcaag accctcggca cgggctcctt 360

cgggcgggtg atgctggtga aacacaagga gaccgggaac cactatgcca tgaagatcct 420

cgacaaacag aaggtggtga aactgaaaca gatcgaacac accctgaatg aaaagcgcat 480

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aaacttatac atggtcatgg agtacgtgcc cggcggggag atgttctcac acctacggcg 600

gatcggaagg ttcagtgagc cccatgcccg tttctacgcg gcccagatcg tcctgacctt 660

tgagtatctg cactcgctgg atctcatcta cagggacctg aagccggaga atctgctcat 720

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cataccaaag tttaaaggcc ctggggatac gagtaacttt gacgactatg aggaagaaga 1200

aatccgggtc tccatcaatg agaagtgtgg caaggagttt tctgagtttt aggggcatgc 1260

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taaaatctta tttaagttcc accagtgcct ccctccctcc ttcctctact cccacccctc 1860

ccatgtcccc ccattcctca aatccatttt aaagagaagc agactgactt tggaaaggga 1920

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tctctgccaa tcctgcgagg gtctaggccc ctttaggaag cctccgctct ctttttcccc 2040

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aaaactatta ccaataaagt tttgtttaaa aaaaaaaaaa aaaaa 2685

<210> 93
<211> 7
<212> PRT
<213> Mus musculus

<400> 93

Met Ala Ser Ser Ser Asn Asp
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<210> 94
<211> 912
<212> DNA
<213> Mus musculus

<400> 94
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cccaccctat cactccctgg ctccctctac aggcagggct ccccccccagg actggcagcc 180

aaactgctgc agcagatctt atgaggcttc cgagccaccg taatgctagt gccctgagaa 240

agactgagtg atggcttcca gctccaacga tggtgaggct gagccctgtt gttatagcaa 300

cttcctagac actgtctgcc ccttaagtca gggaggggct gtgatggggg ctgaggggag 360

caggtggaga gaaggagtct gtggaccctt aagtatccct ggaaatgcct ccattcctaa 420

aatcctgggc tagaaaacct gaggaagaag aacaggggga tgaatggtcc atttcagacc 480

aaagcagatg gtctacccgg agtagggctc cagctgggac aggggatgga gtagtcccac 540

ccagctttgg gattcagacc agaagaaaga taggtccacc ttagacctgg gtacagtaga 600

gtttgcttga taccctgaac cctgcctgga gatagaggga acctagtgtt gggggggtcc 660

ccctcaaact gggggtatag tgcagtacac tcttgcctgc tgctgtgacc ccatatctga 720

atccaaggtg atttccatgt cttgccgtgg cactggcttt cctagaggtg tctggagttt 780

tcgtagcaca tcaaatccag agagtggagg ccaatagcac cctttccttt caaatgagag 840

acatgggctc taccggctag cagcttaggc tatcctctct gtccacttcc tgttggtggc 900

aggcgtccat gg 912

<210> 95
<211> 31
<212> PRT
<213> Homo sapiens

<400> 95

Met Ala Ser Asn Ser Ser Asp Val Lys Glu Phe Leu Ala Lys Ala Lys
1 5 10 15

Glu Asp Phe Leu Lys Lys Trp Glu Ser Pro Ala Gln Asn Thr Ala
20 25 30

<210> 96
<211> 120
<212> DNA
<213> Homo sapiens

<400> 96
ggtgccctga gaacaggact gagtgatggc ttccaactcc agcgatgtga aagaattctt 60

agccaaagcc aaagaagatt ttcttaaaaa atgggaaagt cccgctcaga acacagccca 120

<210> 97
<211> 472
<212> PRT
<213> Blumeria graminis

<400> 97

Met Pro Thr Phe Gly Phe Leu Lys Lys Arg Lys Lys Val Ser Leu Gly
1 5 10 15

His Arg Asp Leu Asp Ser Pro Ala Ser Thr Leu Ser Gln Pro Ala Ser
20 25 30

Pro Ile Thr Pro Ser Thr Ser Arg Gly Leu Gly Glu Pro Ile Asp Thr
35 40 45

Thr Ser Ser Lys Ile Thr Ser Pro Gly Gln Lys Leu Gly Ser Asn Ile
50 55 60

Thr Lys Asp His Arg Gly Thr Arg Thr Thr Val Glu Asp Leu Pro Ser
65 70 75 80

Met Thr Asp Val Ser His Leu Gln Gln Ala Tyr Arg Asn Leu Ser Gln
85 90 95

Gly Ser Thr Ala Ser Lys Ser Asn Leu Leu Thr Ile His Asn Leu Ile
100 105 110

Asn Pro Pro Gln His Asp Gly Ala Gly Gln Ser Lys Val Met Pro Glu
115 120 125

Lys His Met Asn Asn Lys Thr Glu Arg Pro Val Gln Gly Lys Ala Ala
130 135 140

Val Ala Gln Val Arg Gln Thr Lys Gly Lys Tyr Ser Leu Ser Asp Phe
145 150 155 160

Glu Ile Leu Arg Thr Leu Gly Thr Gly Ser Phe Gly Arg Val His Leu
165 170 175

Val Gln Ser Lys His Asn Gln Arg Phe Tyr Ala Val Lys Val Leu Lys
180 185 190

Lys Gln Gln Val Val Lys Met Lys Gln Val Glu His Thr Asn Asp Glu
195 200 205

Arg Ser Met Leu Gln Glu Val Lys His Pro Phe Leu Ile Thr Leu Trp
210 215 220

Gly Thr Phe Gln Asp Ser Lys Asn Leu Tyr Met Val Met Asp Phe Val
225 230 235 240

Glu Gly Gly Glu Leu Phe Ser Leu Leu Arg Lys Ser Gln Arg Phe Pro
245 250 255

Asn Pro Val Ala Lys Phe Tyr Ala Ala Glu Val Thr Leu Ala Leu Glu
260 265 270

Tyr Leu His Lys Lys Asp Ile Ile Tyr Arg Asp Leu Lys Pro Glu Asn
275 280 285

Leu Leu Leu Asp Arg His Gly His Leu Lys Ile Thr Asp Phe Gly Phe
290 295 300

Ala Lys Lys Val Thr Asp Ile Thr Trp Thr Leu Cys Gly Thr Pro Asp
305 310 315 320

Tyr Leu Ala Pro Glu Val Val Ser Ser Lys Gly Tyr Asn Lys Ser Val
325 330 335

Asp Trp Arg Trp Ser Leu Gly Ile Leu Ile Phe Glu Met Leu Cys Gly
340 345 350

Tyr Thr Pro Phe Trp Asp Asn Gly Ser Pro Met Lys Ile Tyr Glu Asn
355 360 365

Ile Leu Lys Gly Arg Val Lys Tyr Pro Pro Tyr Ile His Pro Asp Ala
370 375 380

Gln Asp Leu Ile Gln Arg Leu Ile Thr Ala Asp Leu Thr Lys Arg Leu
385 390 395 400

Gly Asn Leu His Gly Gly Ala Glu Gly Ile Lys Ser His Gln Trp Phe
405 410 415

Ala Glu Val Thr Trp Glu Arg Leu Ala Lys Lys Asp Ile Asp Ala Pro
420 425 430

Tyr Val Pro Pro Val Lys Ala Gly Ser Gly Asp Ala Ser Gln Phe Asp
435 440 445

Lys Tyr Pro Glu Glu Thr Glu Arg Tyr Gly Gln Thr Gly Pro Asp Glu
450 455 460

His Gly Ser Leu Phe Glu Asn Phe
465 470

<210> 98
<211> 1573
<212> DNA
<213> Blumeria graminis

<400> 98
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gattctcctg cttcgacact tagtcaacct gctagtccga ttacccccatc tacctcccga 120

ggtctcggtg aacccattga tacaacttca tcgaaaatca cgtcgcctgg ccaaaaactc 180

ggttctaaca tcacaaaaga tcatcgggga acacgaacta ctgtggagga tttaccttcg 240

atgacagacg tatcacatct ccaacaagct taccgaaact tatcacaggg atctacagca 300

agtaaaagca accttctaac cattcataac ctcatcaatc ccccgcagca cgacggggca 360

ggtcagtcaa aagtcatgcc agaaaaacac atgaacaata aaaccgaacg cccagttcag 420

ggcaaagcag cagtggctca agtcagacag actaagggga agtactcgtt gagcgatttt 480

gaaatattgc gtactcttgg gacaggtagt ttcggtaggg ttcatctggt tcaatcaaag 540

cataatcaaa ggttttacgc cgtgaaagta ttgaaaaagc agcaagtagt aaaaatgaag 600

caagtagagc atacaaatga cgaacgaagt atgttacaag aagtcaagca tcctttcctg 660

ataactttat ggggaacttt ccaagattca aaaaatctat atatggttat ggatttcgtc 720

gaaggtggcg aactcttttc tctattgcga aaatcgcagg tataataaca accctcagat 780

tctatggaag tatctgctaa ttttccaagc gattcccaaa tccagtggcc aagttttacg 840

ccgctgaagt cacattagct ctcgaatacc tgcacaaaaa agacattatt tatcgagatt 900

tgaagccgga gaatttactt ctcgatcgtc acggacatct aaagattact gattttgggt 960

ttgcaaagaa ggtaactgat atcacatgga cactctgtgg tacaccagat tacttagcgc 1020

ctgaagtggt ttcgagtaaa ggctataata aatcagtcga ttggtgagtc ccactttaag 1080

aaacaaaaac gctccgtcta atatatacat gaggtggtcg ctaggcatat taatattcga 1140

aatgctttgt ggctatacgc ccttctggga taatggctca ccaatgaaaa tttatgaaaa 1200

tattctcaag ggtcgcgtca agtaccctcc atatattcac ccagatgcac aagatctcat 1260

tcaacgactt ataactgccg atcttaccaa gcggttagga aatctacatg gtggtgctga 1320

aggaattaaa agccaccagt ggtttgctga agtaacctgg gaaagattag cgaaaaaaga 1380

catagatgca ccatatgtgc caccggtcaa ggcagggtct ggtgatgcaa gtcagtttga 1440

caaatatcct gaagagacgg aacggtacgg gcagacagga ccagacgaag ttttgttccc 1500

cgtaaatcac aacagcttat atttgggttt actgacaaag cttagacacg gaagcttgtt 1560

tgaaaacttc tga 1573

<210> 99
<211> 360
<212> PRT
<213> Homo sapiens

<400> 99

Met Ala Ala Pro Ala Ala Ala Thr Ala Met Gly Asn Ala Pro Ala Lys
1 5 10 15

Lys Asp Thr Glu Gln Glu Glu Ser Val Asn Glu Phe Leu Ala Lys Ala
20 25 30

Arg Gly Asp Phe Leu Tyr Arg Trp Gly Asn Pro Ala Gln Asn Thr Ala
35 40 45

Ser Ser Asp Gln Phe Glu Arg Leu Arg Thr Leu Gly Met Gly Ser Phe
50 55 60

Gly Arg Val Met Leu Val Arg His Gln Glu Thr Gly Gly His Tyr Ala
65 70 75 80

Met Lys Ile Leu Asn Lys Gln Lys Val Val Lys Met Lys Gln Val Glu
85 90 95

His Ile Leu Asn Glu Lys Arg Ile Leu Gln Ala Ile Asp Phe Pro Phe
100 105 110

Leu Val Lys Leu Gln Phe Ser Phe Lys Asp Asn Ser Tyr Leu Tyr Leu
115 120 125

Val Met Glu Tyr Val Pro Gly Gly Glu Met Phe Ser Arg Leu Gln Arg
130 135 140

Val Gly Arg Phe Ser Glu Pro His Ala Cys Phe Tyr Ala Ala Gln Val
145 150 155 160

Val Leu Ala Val Gln Tyr Leu His Ser Leu Asp Leu Ile His Arg Asp
165 170 175

Leu Lys Pro Glu Asn Leu Leu Ile Asp Gln Gln Gly Tyr Leu Gln Val
180 185 190

Thr Asp Phe Gly Phe Ala Lys Arg Val Lys Gly Arg Thr Trp Thr Leu
195 200 205

Cys Gly Thr Pro Glu Tyr Leu Ala Pro Glu Ile Ile Leu Ser Lys Gly
210 215 220

Tyr Asn Lys Ala Val Asp Trp Trp Ala Leu Gly Val Leu Ile Tyr Glu
225 230 235 240

Met Ala Val Gly Phe Pro Pro Phe Tyr Ala Asp Gln Pro Ile Gln Ile
245 250 255

Tyr Glu Lys Ile Val Ser Gly Arg Val Arg Phe Pro Ser Lys Leu Ser
260 265 270

Ser Asp Leu Lys Asp Leu Leu Arg Ser Leu Leu Gln Val Asp Leu Thr
275 280 285

Lys Arg Phe Gly Asn Leu Arg Asn Gly Val Gly Asp Ile Lys Asn His
290 295 300

Lys Trp Phe Ala Thr Thr Ser Trp Ile Ala Ile Tyr Glu Lys Lys Val
305 310 315 320

Glu Ala Pro Phe Ile Pro Lys Tyr Thr Gly Pro Gly Asp Ala Ser Asn
325 330 335

Phe Asp Asp Tyr Glu Glu Glu Glu Leu Arg Ile Ser Ile Asn Glu Lys
340 345 350

Cys Ala Lys Glu Phe Ser Glu Phe
355 360

<210> 100
<211> 1635
<212> DNA
<213> Homo sapiens

<400> 100
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cgcccccgcc aagaaggaca ccgagcagga ggagagcgtg aacgagttcc tagccaaagc 120

cagaggagat ttcctctaca gatggggaaa ccccgctcaa aacaccgcca gctcggatca 180

gttcgaacgg ctcaggacgc tgggcatggg ctccttcggg cgggtgatgc tggtgaggca 240

ccaggagacc ggcggccact acgccatgaa gatcctcaac aagcagaagg tggtgaagat 300

gaagcaggtc gagcacatac tgaacgagaa gcgcatcctg caggcgatcg actttccgtt 360

cctcgtcaag ctccagttct cctttaagga caactcctac ctgtacctgg tgatggagta 420

cgtgccgggt ggggagatgt tctcccgcct acagcgcgtc ggaaggttta gcgagcccca 480

tgcctgtttc tatgccgccc aggtcgtcct ggccgtccag tacctacact cgctcgacct 540

catccaccgc gacctgaagc ccgagaatct cctcatcgac cagcagggct acctgcaggt 600

gacggacttc ggtttcgcca agcgcgtgaa gggccgcact tggaccttgt gcgggacccc 660

agagtacctg gcccccgaga tcatcctgag caaaggctac aacaaggccg tggactggtg 720

ggccctaggg gtgctcatct atgagatggc cgtgggcttc ccacccttct acgccgacca 780

gcccatccag atctacgaga agatcgtctc tgggagggtg cggtttccct ccaaactcag 840

ctctgacctc aaggatctgc tgcggagcct gctgcaggtg gacctcacca agcgcttcgg 900

aaacctcagg aacggggttg gcgacatcaa gaaccacaag tggttcgcca caaccagctg 960

gatcgccatc tatgagaaga aggtggaagc tcccttcatc ccgaagtaca caggccctgg 1020

ggatgccagt aactttgacg actacgagga ggaagagctc cggatctcca tcaatgagaa 1080

gtgtgccaag gagttttctg agttttaggg gtgtgcttgt gcccctgtgg ttttctttcc 1140

tttttgtttt tggtggtttg ggggatggga gggttggatt gaacagccag agggccccag 1200

agttccttgt atctaatttc atcctcaccc acctccaggg ttgggggagc aggaagccca 1260

gatatttgga ggaacagaaa caccagctgc tccctcaccc ccccccatgc cttcctggtc 1320

cctctgtgct tctctctttc tcctccacag gtccccttg ccccagcccc cttctgcctg 1380

ttttaaacga gtttctcagc tctattcagg ccaggtcttg ctgttgtatc aagggacacg 1440

gtgtggaaag aggggctcaa acttaactcc agccctgaac aggcaccact tactaagaga 1500

ggatgaatga aaagcacacc tacccttttgg cgtaatcctg cctgggaagg agagaggttt 1560

agtgccatgt tcagtgggct gtttgctaga ataaaaaatt aaaacaaaaa acaattaaaa 1620

tcttatttaa gttcc 1635

<210> 101
<211> 337
<212> PRT
<213> Ascaris suum

<400> 101

Met Glu Asn Arg Glu Gln Glu Glu Ile Glu Pro Cys Val Ser Ile Thr
1 5 10 15

Ile Asp Pro Asn Asn Asn Lys Leu Asn Val Asp Asp Phe Asp Arg Ile
20 25 30

Cys Thr Ile Gly Thr Gly Ser Phe Gly Arg Val Tyr Leu Val Gln His
35 40 45

Arg Ala Ser Glu Gln Tyr Phe Ala Leu Lys Lys Met Ala Ile Arg Glu
50 55 60

Val Val Ser Met Arg Gln Thr Glu His Val His Ser Glu Lys Arg Leu
65 70 75 80

Leu Ser Arg Leu Ser His Pro Phe Ile Val Lys Met Tyr Cys Ala Ser
85 90 95

Trp Asp Lys Tyr Asn Leu Tyr Met Leu Phe Glu Tyr Leu Ala Gly Gly
100 105 110

Glu Leu Phe Ser Tyr Leu Arg Ala Ser Arg Thr Phe Ser Asn Ser Met
115 120 125

Ala Arg Phe Tyr Ala Ala Glu Ile Val Cys Ala Leu Gln Tyr Leu His
130 135 140

Ser Lys Asn Ile Ala Tyr Arg Asp Leu Lys Pro Glu Asn Leu Met Leu
145 150 155 160

Asn Lys Glu Gly His Leu Lys Met Thr Asp Phe Gly Phe Ala Lys Glu
165 170 175

Val Ile Asp Arg Thr Trp Thr Met Cys Gly Thr Pro Glu Tyr Leu Ala
180 185 190

Pro Glu Val Ile Gly Asn Lys Gly His Asp Thr Ala Val Asp Trp Trp
195 200 205

Ser Leu Gly Val Leu Ile Tyr Glu Met Met Ile Gly Ile Pro Pro Phe
210 215 220

Arg Gly Lys Thr Leu Asp Glu Ile Tyr Glu Lys Ile Ile Leu Gly Lys
225 230 235 240

Leu Arg Phe Thr Arg Ser Phe Asp Leu Phe Ala Lys Asp Leu Val Lys
245 250 255

Lys Leu Leu Gln Val Asp Arg Thr Gln Arg Leu Gly Asn Gln Lys Asp
260 265 270

Gly Ala Ala Asp Val Met Asn His Lys Trp Phe Thr Asp Ile Asp Trp
275 280 285

Asp Asp Val Gln Asn Met Lys Leu Thr Pro Pro Ile Ile Pro Thr Leu
290 295 300

Tyr Ser Asn Gly Asp Thr Gly Asn Phe Asp Ser Tyr Asp Glu Cys Ser
305 310 315 320

Asp Asp Glu Ile Ala Ala Pro Gln His Glu Leu Glu Leu Phe Glu Asp
325 330 335

Trp

<210> 102
<211> 1336
<212> DNA
<213> Ascaris suum

<400> 102
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agtggtttaa gccttaaaga ggcaaattcg ccgatagttt tacgagcgat attttacgct 120

atcatatcgg tgaattgtaa ttctcggcaa tggagaatcg agaacaagaa gaaattgaac 180

catgtgtttc aatcactatc gatccaaaca ataacaaact taacgtcgat gattttgatc 240

gtatttgcac tatcggaacg ggatcgtttg gtcgagtata tcttgtgcag catcgtgctt 300

ctgagcaata ttttgcgctt aagaaaatgg ccattcgaga ggtggtctcg atgcgtcaaa 360

ccgagcatgt ccactccgag aagagactgc tgtcgcgtct ttcccatccc ttcatcgtta 420

aaatgtattg cgcttcgtgg gacaaataca atctctacat gctattcgag tatctagcag 480

gtggagagct gttctcatac ttgcgtgcct cgcgaacttt ctcgaactca atggctcgtt 540

tctacgcagc tgaaattgtc tgcgcacttc aatacttaca ctcgaaaaat atcgcttatc 600

gtgatttgaa accggaaaat ttaatgctaa ataaagaggg acatctcaaa atgactgatt 660

tcggtttcgc aaaagaagtt attgacagaa catggacaat gtgtggtact ccggagtact 720

tagcacctga ggtgatcggc aataaaggac acgatacagc ggtcgattgg tggtcattgg 780

gtgttctcat ctatgagatg atgatcggta taccaccgtt tcgtggtaaa actcttgacg 840

agatctacga aaaaatcatt ttgggcaaac ttcgcttcac tcgctcgttt gatttatttg 900

ctaaggatct tgtgaagaag ttgctacaag tggatcgtac acaacgatta gggaatcaga 960

aggatggtgc agctgatgta atgaatcata aatggttcac cgatatcgat tgggatgatg 1020

tacaaaatat gaagcttacc cctccaatca ttccgacatt atattcaaac ggagatacgg 1080

gcaatttcga ttcttatgat gaatgcagcg atgatgaaat tgcagcacct caacatgagc 1140

tcgaactatt cgaagactgg tgatacattg tatatgtgct gtgtgtgcat tatgtatgta 1200

tatatatcca ctccctgtcg cactcattaa ccatctttta gaaattatgt tctcatcaca 1260

ttgtgttctt atttacacca acaaataaca tgcgcatgcg catgttcgag tactgctaaa 1320

aattttgtgt agaccc 1336

<210> 103
<211> 334
<212> PRT

<213> Rattus norvegicus

<400> 103

Glu Phe Leu Ser Lys Ala Lys Glu Asp Phe Leu Arg Lys Trp Glu Asn
1 5 10 15

Pro Pro Pro Ser Asn Ala Gly Leu Glu Asp Phe Glu Arg Lys Lys Thr
20 25 30

Leu Gly Thr Gly Ser Phe Gly Arg Val Met Leu Val Lys His Lys Ala
35 40 45

Thr Glu Gln Tyr Tyr Ala Met Lys Ile Leu Asp Lys Gln Lys Val Val
50 55 60

Lys Leu Lys Gln Ile Glu His Thr Leu Asn Glu Lys Arg Ile Leu Gln
65 70 75 80

Ala Val Glu Phe Pro Phe Leu Val Gly Leu Glu Tyr Ser Phe Lys Asp
85 90 95

Asn Ser Asn Leu Tyr Met Val Met Glu Tyr Val Pro Gly Gly Glu Met
100 105 110

Phe Ser His Leu Arg Arg Ile Gly Arg Phe Ser Glu Pro His Ala Arg
115 120 125

Phe Tyr Ala Ala Gln Ile Val Leu Thr Phe Glu Tyr Leu His Ser Leu
130 135 140

Asp Leu Ile Tyr Arg Asp Leu Lys Pro Glu Asn Leu Leu Ile Asp His
145 150 155 160

Gln Gly Tyr Ile Gln Val Thr Asp Phe Gly Phe Ala Lys Arg Val Lys
165 170 175

Gly Arg Thr Trp Thr Phe Cys Gly Thr Pro Glu Tyr Leu Ala Pro Glu
180 185 190

Ile Ile Leu Ser Lys Gly Tyr Asn Lys Ala Val Asp Trp Trp Ala Leu
195 200 205

Gly Val Leu Ile Tyr Glu Met Ala Ala Gly Tyr Pro Pro Phe Phe Ala
210 215 220

Asp Gln Pro Ile Gln Ile Tyr Glu Lys Ile Val Ala Gly Lys Val Arg
225 230 235 240

Phe Pro Ser His Phe Ser Ser Asp Leu Lys Asp Leu Leu Arg Asn Leu
245 250 255

Leu Gln Val Asp Leu Thr Lys Arg Phe Gly Asn Leu Lys Asp Gly Val
260 265 270

Asn Asp Ile Lys Asn His Lys Trp Phe Ala Thr Thr Glu Trp Ile Ala
275 280 285

Ile Tyr Pro Arg Lys Val Glu Ala Pro Phe Ile Pro Lys Phe Lys Gly
290 295 300

Phe Gly Asp Thr Ser Asn Phe Asp Asp Tyr Glu Glu Glu Glu Ile Arg
305 310 315 320

Val Arg Ile Thr Glu Lys Cys Gly Lys Glu Phe Ser Glu Phe
325 330

<210> 104
<211> 1002
<212> DNA
<213> Rattus norvegicus

<400> 104
gaattcctat ccaaagccaa agaagacttt ctgaggaaat gggagaaccc tcccccgagt 60

aatgctgggc ttgaggattt tgaaaggaaa aaaaccttgg gaacgggttc cttcggaaga 120

gtcatgctgg taaagcataa ggccactgag cagtactacg ccatgaagat cttagacaag 180

cagaaggtcg ttaagctaaa gcaaatagag cacactctga atgagaagag aatcctgcag 240

gcagtggagt tcccgttcct tgttgggctg gagtattctt ttaaggataa ttctaattta 300

tacatggtta tggaatacgt tcctgggggg gaaatgtttt cacatctaag aagaattgga 360

aggttcagtg aaccccatgc tcgtttctat gcagctcaga tcgtgctaac atttgagtac 420

ctccattccc tcgacctcat ctacagagat ctcaagccgg aaaacctctt aattgaccac 480

cagggttaca tccaggtcac agattttggg ttcgccaaga gagtcaaggg caggacttgg 540

acattctgtg gcaccccaga gtacctggcc ccagagatca tcctcagcaa gggttacaat 600

aaggcagtgg actggtgggc attgggtgta ctgatctacg agatggctgc tggctacccc 660

ccgttctttg ctgaccagcc aattcagatt tatgagaaga ttgttgccgg aaaggtccgc 720

ttcccgtcgc acttcagttc cgatctcaag gaccttctgc ggaatctgct gcaggtggat 780

ctcaccaagc gctttggaaa ccttaaggac ggggttaatg acatcaaaaa ccacaagtgg 840

tttgctacta ccgaatggat cgcgatttac ccgagaaagg ttgaggctcc tttcatacca 900

aaattcaaag gctttggcga tacatctaac ttcgatgact atgaagaaga agagatccga 960

gtccgtataa cagaaaaatg tggaaaggag ttttctgaat tt 1002

<210> 105
<211> 207
<212> PRT
<213> Homo sapiens

<400> 105

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Glu Phe Leu Ala Lys Ala Lys Glu Asp Phe Leu Lys Lys Trp Glu Ser
1               5                  10                  15

Pro Ala Gln Asn Thr Ala His Leu Asp Gln Phe Glu Arg Ile Lys Thr
            20                  25                  30

Leu Gly Thr Gly Ser Phe Gly Arg Val Met Leu Val Lys His Lys Glu
        35                  40                  45

Thr Gly Asn His Tyr Ala Met Lys Ile Leu Asp Lys Gln Lys Val Val
    50                  55                  60

Lys Leu Lys Gln Ile Glu His Thr Leu Asn Glu Lys Arg Ile Leu Gln
65                  70                  75                  80

Ala Val Asn Phe Pro Phe Leu Val Lys Leu Glu Phe Ser Phe Lys Asp
                85                  90                  95

Asn Ser Asn Leu Tyr Met Val Met Glu Tyr Val Pro Gly Gly Glu Met
            100                 105                 110

Phe Ser His Leu Arg Arg Ile Gly Arg Phe Ser Glu Pro His Ala Arg
        115                 120                 125

Phe Tyr Ala Ala Gln Ile Val Leu Thr Phe Glu Tyr Leu His Ser Leu
    130                 135                 140

Asp Leu Ile Tyr Arg Asp Leu Lys Pro Glu Asn Leu Leu Ile Asp Gln
145                 150                 155                 160

Gln Gly Tyr Ile Gln Val Thr Asp Phe Gly Phe Ala Lys Arg Val Lys
                165                 170                 175

Gly Arg Thr Trp Thr Leu Cys Gly Thr Pro Glu Tyr Leu Ala Pro Glu
            180                 185                 190

Ile Ile Leu Ser Lys Val Gly Ala Ser Pro Ala Leu Pro Phe Pro
        195                 200                 205
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<210> 106
<211> 936
<212> DNA
<213> Homo sapiens

<400> 106
gaattcttag ccaaagccaa agaagatttt cttaaaaaat gggaaagtcc cgctcagaac 60

acagcccact tggatcagtt tgaacgaatc aagaccctcg gcacgggctc cttcgggcgg 120

gtgatgctgg tgaaacacaa ggagaccggg aaccactatg ccatgaagat cctcgacaaa 180

cagaaggtgg tgaaactgaa acagatcgaa cacaccctga atgaaaagcg catcctgcaa 240

gctgtcaact ttccgttcct cgtcaaactc gagttctcct tcaaggacaa ctcaaactta 300

tacatggtca tggagtacgt gcccggcggg gagatgttct cacacctacg gcggatcgga 360

aggttcagtg agccccatgc ccgtttctac gcggcccaga tcgtcctgac ctttgagtat 420

ctgcactcgc tggatctcat ctacagggac ctgaagccgg agaatctgct cattgaccag 480

cagggctaca ttcaggtgac agacttcggt ttcgccaagc gcgtgaaggg ccgcacttgg 540

accttgtgcg gcacccctga gtacctggcc cctgagatta tcctgagcaa agtaggagcc 600

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gggttcttat ctatgaaatg gccgctggct acccgccctt cttcgcagac cagcccatcc 780

agatctatga gaagatcgtc tctgggaagg tgaggtccgg atgtgggaca cagccctgga 840

agaaacagac cgttccctgc tcacccatcc tattccctgg ggagccctgc ttgttgtcag 900

aataatctag aagttcctta aaaaaaaaaa aaaaaa 936

<210> 107
<211> 377
<212> DNA
<213> Aplysia californica

<400> 107
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ctcgtttaaa ttgtcatttt tcaaatcatt ttaggatttt gaaattgttt ttattcattt 120

tgagttcagg aagaatgtaa tgaaatatca ctacccggaa cgaccgtgtt tcttgcattg 180

attcggtaat aaacatttct cagttctgag agaagaggtg ttagtattgt ttgtggcttt 240

cgtgttgcgt gcgtggacta ggattcttat cgggattaca cttctgtttt tcaaactaac 300

gggattatct gctcagcacc tgtttgtgca gtcaaacact atcagattgg aggtgcagta 360

gcagttacac tcaggat 377

<210> 108
<211> 67
<212> PRT
<213> Aplysia californica

<400> 108

Met Ala Asp Ile Ile His Lys Leu Phe Gly Gln Lys His Gly Lys His
1 5 10 15

Ser Asp Gln Gly Ala Lys Ser Ser Asp Gly Glu Gly Tyr Thr Lys Gln
20 25 30

Gln His Glu Phe Phe Lys Glu Phe Leu Ala Arg Ala Lys Glu Glu Phe
35 40 45

Gln Asn Lys Trp Asp His Pro Pro Ala Ser Thr Ser Cys Leu Asp Asp
50 55 60

Phe Asp Arg
65

<210> 109
<211> 343
<212> DNA
<213> Aplysia californica

<400> 109
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taccgacacg gaggaagcaa ctgcgccgtt gattggattt gaaccccgaa cctttcagaa 120

tcggggtggt tgagcgaccg aaatggctga tattattcac aagttgttcg gtcagaaaca 180

tggaaagcat tcggatcagg gagccaagtc gtctgatgga gaaggctaca ccaaacagca 240

gcacgagttc ttcaaagaat tcttggccag agccaaagag gaatttcaga acaaatggga 300

tcacccacca gcaagcacat catgcttaga cgacttcgac aga 343

<210> 110
<211> 351
<212> PRT
<213> Mus musculus

<400> 110

Met Gly Asn Ala Ala Ala Ala Lys Lys Gly Ser Glu Gln Glu Ser Val
1 5 10 15

Lys Glu Phe Leu Ala Lys Ala Lys Glu Asp Phe Leu Lys Lys Trp Glu
20 25 30

Thr Pro Ser Gln Asn Thr Ala Gln Leu Asp Gln Phe Asp Arg Ile Lys
35 40 45

Thr Leu Gly Thr Gly Ser Phe Gly Arg Val Met Leu Val Lys His Lys
50 55 60

Glu Ser Gly Asn His Tyr Ala Met Lys Ile Leu Asp Lys Gln Lys Val
65 70 75 80

Val Lys Leu Lys Gln Ile Glu His Thr Leu Asn Glu Lys Arg Ile Leu
85 90 95

Gln Ala Val Asn Phe Pro Phe Leu Val Lys Leu Glu Phe Ser Phe Lys
100 105 110

Asp Asn Ser Asn Leu Tyr Met Val Met Glu Tyr Val Ala Gly Gly Glu
115 120 125

Met Phe Ser His Leu Arg Arg Ile Gly Arg Phe Ser Glu Pro His Ala
130 135 140

Arg Phe Tyr Ala Ala Gln Ile Val Leu Thr Phe Glu Tyr Leu His Ser
145 150 155 160

Leu Asp Leu Ile Tyr Arg Asp Leu Lys Pro Glu Asn Leu Leu Ile Asp
165 170 175

Gln Gln Gly Tyr Ile Gln Val Thr Asp Phe Gly Phe Ala Lys Arg Val
180 185 190

Lys Gly Arg Thr Trp Thr Leu Cys Gly Thr Pro Glu Tyr Leu Ala Pro
195 200 205

Glu Ile Ile Leu Ser Lys Gly Tyr Asn Lys Ala Val Asp Trp Trp Ala
210 215 220

Leu Gly Val Leu Ile Tyr Glu Met Ala Ala Gly Tyr Pro Pro Phe Phe
225 230 235 240

Ala Asp Gln Pro Ile Gln Ile Tyr Glu Lys Ile Val Ser Gly Lys Val
245 250 255

Arg Phe Pro Ser His Phe Ser Ser Asp Leu Lys Asp Leu Leu Arg Asn
260 265 270

Leu Leu Gln Val Asp Leu Thr Lys Arg Phe Gly Asn Leu Lys Asn Gly
275 280 285

Val Asn Asp Ile Lys Asn His Lys Trp Phe Ala Thr Thr Asp Trp Ile
290 295 300

Ala Ile Tyr Gln Arg Lys Val Glu Ala Pro Phe Ile Pro Lys Phe Lys
305 310 315 320

Gly Pro Gly Asp Thr Ser Asn Phe Asp Asp Tyr Glu Glu Glu Glu Ile
325 330 335

Arg Val Ser Ile Asn Glu Lys Cys Gly Lys Glu Phe Thr Glu Phe
340 345 350

<210> 111
<211> 2292
<212> DNA
<213> Mus musculus

<400> 111
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ggggtcgtgg cgccgcagcc agcgcagcca gccccagggg ccgccgcctc cgctgcccag 120

cgcgctccgg ggccgccggc caccttagca cccgccgcgt cgcagctccg ggactggccc 180

cggccgcgac gccgccgcga tgggcaacgc cgccgccgcc aagaagggca gcgagcagga 240

gagcgtgaaa gagttcctag ccaaagccaa ggaagatttc ctgaaaaaat gggagacccc 300

ttctcagaat acagcccagt tggatcagtt tgatagaatc aagacccttg gcaccggctc 360

ctttgggcga gtgatgctgg tgaagcacaa ggagagtggg aaccactacg ccatgaagat 420

cttagacaag cagaaggtgg tgaagctaaa gcagatcgag cacactctga atgagaagcg 480
catcctgcag gccgtcaact tcccgttcct ggtcaaactt gaattctcct tcaaggacaa 540
ctcaaacctg tacatggtca tggagtatgt agctggtggc gagatgttct cccacctacg 600
gcggattgga aggttcagcg agccccatgc ccgtttctac gcggcgcaga tcgtcctgac 660
ctttgagtat ctgcactccc tggacctcat ctaccgggac ctgaagcccg agaatcttct 720
catcgaccag cagggctata ttcaggtgac agacttcggt tttgccaagc gtgtgaaagg 780
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ctgtgcatca gccccccttaa gaagcctccc ccatcctggg cgcctcgctt ctagcttagc 1980
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gtgctttttc tctcaataga aaggtgggga gctgctgggg aaattacccc atttatccct 2100
gtgtttatcc ctctcgtaac ttctcccaaa aaggaggagc tctcaggcct gggtgggggc 2160
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aaaaaaaaaa aa 2292

<210> 112
<211> 115

<212> PRT
<213> Homo sapiens

<400> 112

Met Ile Pro Ala Lys Asp Met Ala Lys Val Met Ile Val Met Leu Ala
1 5 10 15

Ile Cys Phe Leu Thr Lys Ser Asp Gly Lys Ser Val Lys Lys Arg Ser
20 25 30

Val Ser Glu Ile Gln Leu Met His Asn Leu Gly Lys His Leu Asn Ser
35 40 45

Met Glu Arg Val Glu Trp Leu Arg Lys Lys Leu Gln Asp Val His Asn
50 55 60

Phe Val Ala Leu Gly Ala Pro Leu Ala Pro Arg Asp Ala Gly Ser Gln
65 70 75 80

Arg Pro Arg Lys Lys Glu Asp Asn Val Leu Val Glu Ser His Glu Lys
85 90 95

Ser Leu Gly Glu Ala Asp Lys Ala Asp Val Asn Val Leu Thr Lys Ala
100 105 110

Lys Ser Gln
115

<210> 113
<211> 175
<212> PRT
<213> Homo sapiens

<400> 113

Met Gln Arg Arg Leu Val Gln Gln Trp Ser Val Ala Val Phe Leu Leu
1 5 10 15

Ser Tyr Ala Val Pro Ser Cys Gly Arg Ser Val Glu Gly Leu Ser Arg
20 25 30

Arg Leu Lys Arg Ala Val Ser Glu His Gln Leu Leu His Asp Lys Gly
35 40 45

Lys Ser Ile Gln Asp Leu Arg Arg Arg Phe Phe Leu His His Leu Ile
50 55 60

Ala Glu Ile His Thr Ala Glu Ile Arg Ala Thr Ser Glu Val Ser Pro
65 70 75 80

Asn Ser Lys Pro Ser Pro Asn Thr Lys Asn His Pro Val Arg Phe Gly
85 90 95

Ser Asp Asp Glu Gly Arg Tyr Leu Thr Gln Glu Thr Asn Lys Val Glu
100 105 110

Thr Tyr Lys Glu Gln Pro Leu Lys Thr Pro Gly Lys Lys Lys Lys Gly
115 120 125

Lys Pro Gly Lys Arg Lys Glu Gln Glu Lys Lys Lys Arg Arg Thr Arg
130 135 140

Ser Ala Trp Leu Asp Ser Gly Val Thr Gly Ser Gly Leu Glu Gly Asp
145 150 155 160

His Leu Ser Asp Thr Ser Thr Thr Ser Leu Glu Leu Asp Ser Arg
165 170 175

<210> 114
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> The residue at this position can be Serine or Aspartic acid.

<400> 114

Ala Val Ser Glu His Gln Leu Leu His Xaa
1 5 10

<210> 115
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 115

Ser Val Ser Glu Ile Gln Leu Met Asn Leu
1 5 10

<210> 116
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 116

Val Ala Pro Ser Asp Ser Ile Gln Ala Glu Glu Trp Tyr Phe Gly Lys
1 5 10 15

Ile Thr Arg Arg Glu
20